

JVC | Instructions

3-CCD COLOR VIDEO CAMERA

KY-25 SERIES

(NTSC/PAL)

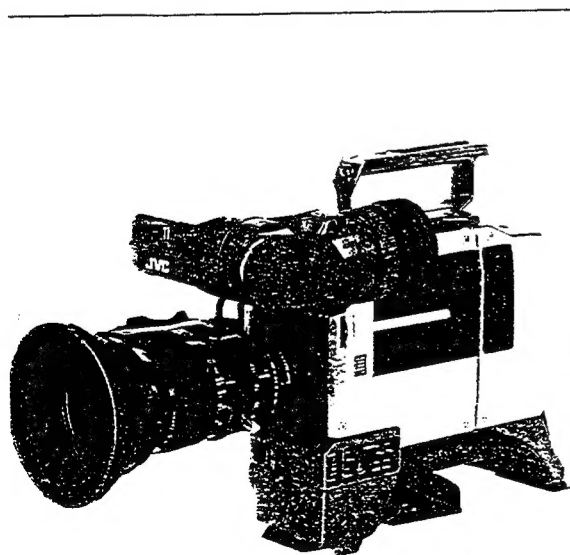


Photo shows the KY-25 video camera.

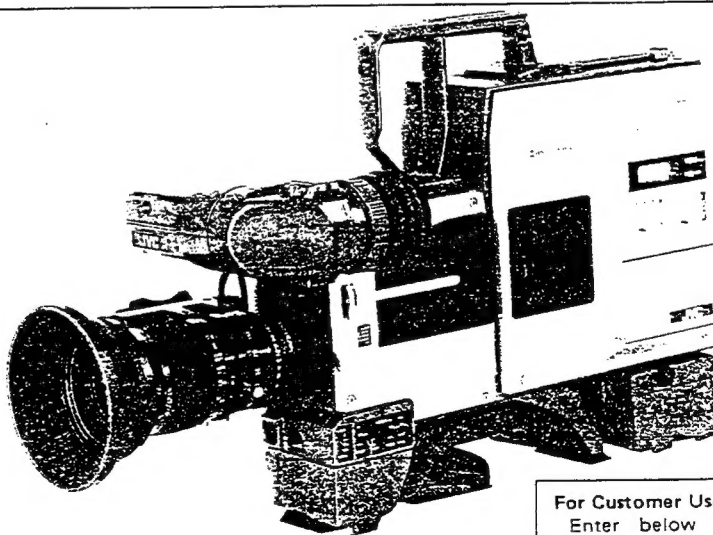


Photo shows the KY-R25 video camera with an optional recorder (BR-S410), and lens (HZ-516B).

For Customer Use:

Enter below the Serial No. which is located on the top frame. Retain this information for future reference.

Model No. KY-25/-H2, KY-R25

Serial No. _____



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

WARNING:
TO PREVENT FIRE OR SHOCK
HAZARD, DO NOT EXPOSE THIS
UNIT TO RAIN OR MOISTURE.

AVERTISSEMENT:
POUR EVITER LES RISQUES
D'INCENDIE OU D'ELECTROCUTION,
NE PAS EXPOSER L'APPAREIL A
L'HUMIDITE OU A LA PLUIE.

POWER SYSTEM

This color video camera should be used with 12 V DC only.

CAUTION:

To prevent electric shocks and fire hazards, do NOT use other than specified power source.

Système d'alimentation

Cette caméra vidéo couleur ne doit être utilisée que sur tension continue de 12 V.

Attention:

Pour éviter tout risque d'incendie ou d'électrocution, n'utilisez aucune autre source d'alimentation.

Information for Canada

This product complies with D.O.C limits (C.R.C., C.1374) pertaining to class B digital apparatus.

Renseignements pour Canada

Ce produit est conforme aux normes du M.D.C. (C.R.C., ch.1374) s'appliquant aux appareils numériques de classe B.

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NOTES

(1) KY-25/-H25

- The carrying handle KA-232 provided as an accessory is used when combined with the camcorder VTR BR-S410.

For installation, refer to page 20 of the KY-R25 Instruction.

- At this time, the camera adapter KA-20 needs to be removed. Refer to page 34.

(2) KY-R25

- If you wish to connect the VTR using the VTR cable, the camera adapter KA-20 and carrying handle KA-231 are necessary.

For installation, refer to page 34.

For handling, refer to the relevant descriptions in the KY-25/-H25 Instruction.

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
5. Do not use this appliance near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
6. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

PORTABLE CART WARNING
(symbol provided by RETAC)



S3126A

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
8. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
9. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
10. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
11. Follow all warnings and instructions marked on the appliance.
12. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
13. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
14. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
15. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the appliance.
 - c. If the appliance has been exposed to rain or water.
 - d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
 - e. If the appliance has been dropped or the cabinet has been damaged.
 - f. When the appliance exhibits a distinct change in performance — this indicates a need for service.
16. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
17. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

JVC
VICTOR COMPANY OF JAPAN, LIMITED
TOKYO, JAPAN

 Printed in Japan

KY-25/-H25 Instruction

Thank you for purchasing the JVC KY-25/-H25 Color Video Camera. This video camera is a compact, sturdy unit designed especially for portability making it suitable for a wide range of applications in the field and in the studio. Productions can be shot in a variety of situations by using this camera in combination with a portable VTR.

To gain maximum benefit from the camera, it is suggested that you study this booklet carefully. After reading, retain it for future reference.

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FEATURES

- **Excellent picture reproduction with 3 interline transfer CCD chips.**
 - Compact design, lighter weight and less power consumption than conventional tube cameras.
 - Low lag and a high resistance to image burn-in with no deflection distortion.
 - High sensitivity and S/N attribute to the excellent performance in low light situations.
 - Excellent resistance to vibration and impact.
 - Virtually no misregistration from terrestrial magnetism.
 - 530 lines of horizontal resolution is attributed to a high-precision F1.4 prism, coupled with 360,000 (U-Version)/430,000 (E-Version) pixel CCD's for each of the Red, Green and Blue channels. Due to the use of half pitch spatial offset, a Y-channel typical horizontal resolution of 700 can be obtained.
 - RGB use is possible with the optional RM-P200 remote control unit for computer graphics and other RGB applications.
- **Component, Composite and Y/C Outputs**
With these three outputs the KY-25/-H25 can meet a variety of VTR configurations with different VTR cables; Y, R-Y, B-Y for MII, Y/C for S-VHS or Composite for standard use.
- **Built-in Electronic Shutter**
By employing the use of a variable electronic shutter, blurred images are a thing of the past. Shutter speeds of 1/250th, 1/500th and 1/1000th are now possible, in addition to the 1/60th (U-Version)/1/50th (E-Version) standard. This allows for clear visibility, of fast moving objects, during slow-motion analysis.
- **Character display of operation**
On the screen of the viewfinder, VF-P10, camera operating conditions are indicated by logical character displays.
- **Microcomputer-controlled automatic set-ups**
Auto White, Black and Iris functions are controlled by a microcomputer for exact balancing and level adjustments. This one-touch process results in quality pictures with optimum levels under any conditions.
- **Comprehensive functions**
 - Standard 2H contour correction is provided.
 - 3 Settings for white balancing.
Two memory positions are available and a 3200K preset for emergencies, whether you are indoors or out. (Depends on filter wheel settings)
 - Negative and positive signal output is possible for film transfer applications.
 - Color-Matrixing for exact camera matching.
- **Meeting studio camera requirements**
Using the optional remote control unit RM-P200, extension up to a maximum of 100 m (325 ft) is possible. From the RM-P200, the composite and RGB signals (Y/C signals or Y/R-Y/B-Y (for MII) signals can be selected using an internal select switch) can be obtained.

PRECAUTIONS

Safety Precautions

- Use only the optional DC-C11/NB-G1 (with BH-P20) Battery Pack or the optional ***AA-P200**/AA-P250 AC Power Adapter. (*AA-P200: U-Version only)
- Do not modify the unit or operate it without cover panel to prevent danger.
- When there is any abnormality (abnormal noise, smell, smoke, etc.) with the unit, immediately turn the power off and contact your nearest JVC-authorized service agent.
- Do not damage or fray the power cord. Otherwise, this will cause leakage or electrical shock.
- If the camera is not going to be used for an extended period of time, leave the power cord disconnected for reasons of safety.
- If there is a danger of being struck by lightning during outdoor shooting, evacuate to a safe place immediately.

Handling Precautions

- **Supply voltage**
Make sure that the power is between 10.5 V and 15 V DC. If the power voltage is too low, abnormal color and increased noise could occur. Do not exceed 15 V DC in any case, or the unit could be damaged.
- **Connecting to a portable VTR**
Different VTRs require different start/stop triggering modes and connection cables. Before connection, carefully read "Connection to Video Recorder" on page 10.
- **Ambient temperature**
Do not operate the camera outside a -5°C to $+45^{\circ}\text{C}$ (23°F to 113°F) temperature range. Refer to the corresponding item in the "Specifications" on page 18.
- Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture may contain noise and the colors may be incorrect.
- When a wireless microphone or wireless microphone tuner is used near the camera, the tuner could pick up noise. In such a case, select another channel.

STANDARD CONFIGURATION

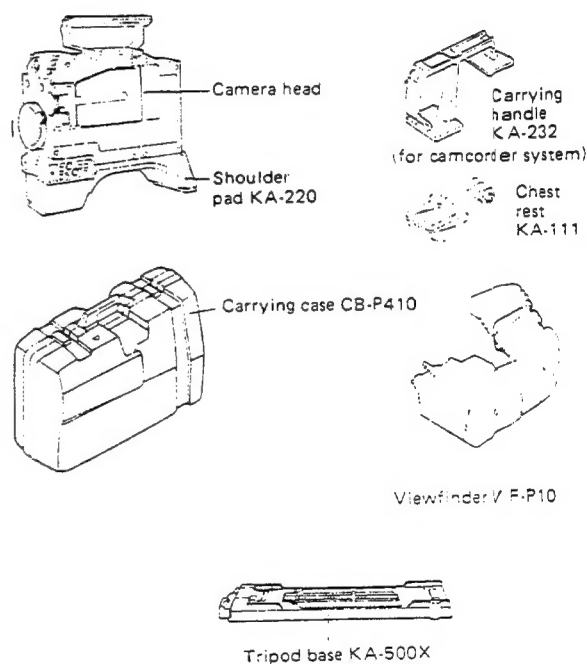
The KY-25 is designed as a field work camera such as for ENG/EP and the KY-H25 is prepared as an input camera for image processing, etc.

The camera head of the KY-25 and KY-H25 is the same; the only differences are listed below. For this reason, camera operation itself is the same for the two cameras.

Other differences are as given in the table below.

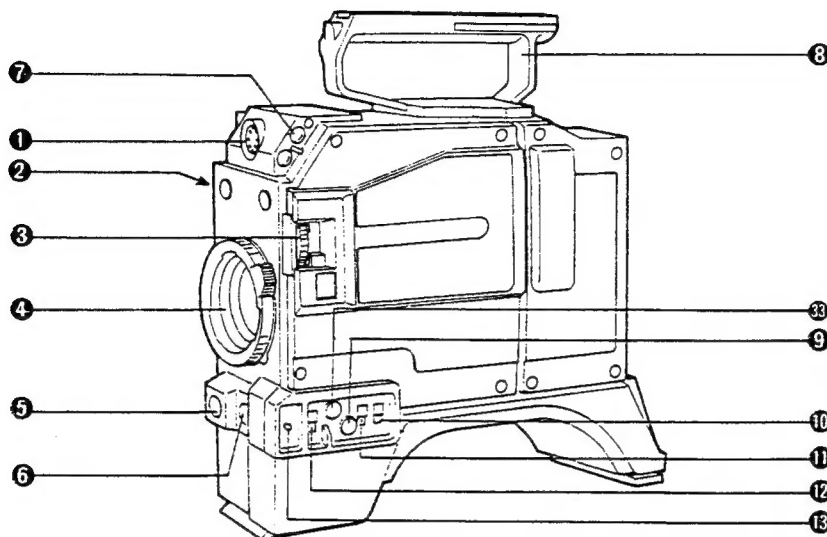
Model name	KY-25	KY-H25
Configuration		
Camera head	○	○
Shoulder pad (KA-220)	○	X
Viewfinder (VF-P10)	○	X
Tripod base (KA-500X)	○	X
Carrying case (CB-P410)	○	X
Carrying handle (KA-232)	○	X
Chest rest (KA-111)	○	X

○: Provided X: Not provided



CONTROLS, CONNECTORS AND INDICATORS

Camera Head



① Viewfinder connector (VF)

Connector for a exclusive viewfinder (VF-P10).

② Lens connector (LENS)

Connect the cable from the standard lens.

③ Filter turret

The turret for the Neutral Density and color temperature conversion filters is provided with four positions.

- 1) CLOSE: Same condition as lens being capped.
- 2) 3200K: For shooting indoors or outdoors with insufficient light.
- 3) 5600K: For shooting outdoors.
- 4) 5600K ND: The 12.5 % ND filter and 5600K color filter are combined for shooting outdoors in direct sunlight or on a bright day.

④ Lens mount ring

⑤ Auto setup button (AUTO SETUP)

Press this button to adjust the setup (black/white balance) or the white balance automatically and save the state in memory. When the button is pressed once, the white balance is adjusted; when depressed continuously for longer than one second, the setup is adjusted.

Before pressing this button, set white balance mode switch ⑩ to the AUTO 1 or AUTO 2 (whichever you want to save) position.

⑥ Video recorder start switch (VTR)

For start/stop triggering of the VTR.

⑦ Shutter speed select button and indicator lamp (SHUTTER)

This button permits speed selection of the electronic shutter. This is effective when shooting fast-moving subjects.

250 500 1000

SHUTTER

Every time this button is pressed, the shutter speed will change to 1/250, 1/500 and 1/1000 in this order (cyclic operation). At this time, the indicator lamp comes on.

NORMAL

If this button is pressed, the shutter speed will become *1/60. (*E-Version: 1/50) Normally use in this state. The indicator lamp goes out.

⑧ Carrying handle (KA-231)

⑨ Display select button (DISP SELECT)

This camera has a function to display the setting conditions of various control switches and settings in the viewfinder screen. There are two display screens; every time this button is pressed, the display will change from "no indication" to "screen 1" to "screen 2" sequentially.

⑩ White balance mode switch (W. BAL)

This switch permits mode selection of white balance.

AUTO 1: Set to either position when activating the auto and setup or auto white balance function. This camera AUTO 2 has two auto white memory circuits and this switch serves as its select switch.

PRESET: For using in the preset (3200K) state or 5600K with change of filter wheel.

⑪ Camera/color bar select switch (MODE)

CAM: Outputs the video signal from the camera to the video output.

BARS: Outputs the color bar signal to the video output.

NEGA: Outputs the negative video signal from the camera to the video output.

⑫ Sensitivity select switch (HI-SENS)

For use in low light conditions, the camera sensitivity gain can be boosted by +9 dB or +18 dB. Normal operation is "0 dB".

⑬ Operation switch (CAMERA/VTR)

3-step select switch. Selects "ON", "OFF" of the camera power and VTR power-save mode*.

* This may not be possible with some VTRs.

⑭ Camera cable select switch (MODE)

Select according to the application of camera cable connector ②.

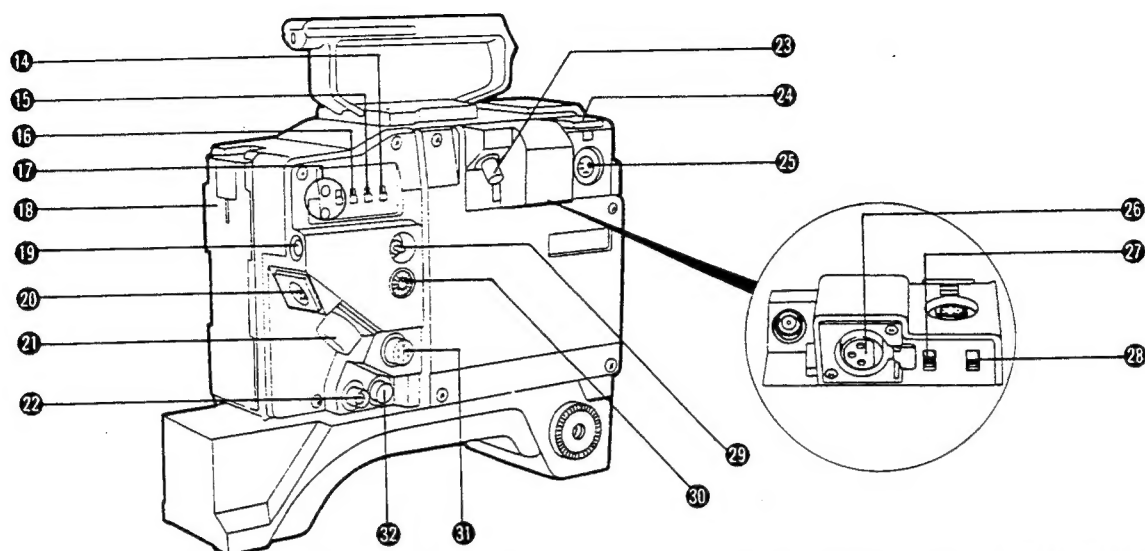
VTR: Set to this position when connecting to a portable VTR with a composite signal input or component signal input (Y, R-Y, B-Y).

Y/C 358: Set to this position when connecting to a VTR (Y/C 443) with separate Y/C signal inputs (S-VHS recorder).

RM: Set to this position when connecting a remote control unit (RM-P200)

⑮ VTR triggering mode select switch (VTR)

Set according to the start/stop triggering mode of the VTR connected.



Switch position	VTR connector	VTR trigger
L	10-pin	Ground start
H	10-pin	4 V start
B	14-pin	4 V start

16 Mic output level select switch (AUDIO LEVEL)

Selects the microphone (audio) output level through camera cable connector 21.

H: Outputs at an approximate level of -20 dB.

L: Outputs at microphone own level.

17 Phase adjustment control (PHASE)

Adjusts the phase of the video signal output from the camera with respect to the external reference signal when genlocking to other video sources.

H: For adjustment of H phase.

SC: Coarse; For coarse adjustment of SC phase in three steps, 0°-120°-240°.

Fine: For fine, continuous adjustment of SC phase.

18 Battery Guide

Guide for battery pack (DC-C11 optional). This is also used as a holder when the AC power adapter ***AA-P200** (optional) or battery holder BH-P20 (optional, for the exclusive battery NB-G1) is used. (*AA-P20: U-Version only)

19 Earphone jack (EARPHONE)

When the video recorder used has a return audio signal line, this jack makes it possible to monitor the audio signal during recording or playback.

20 DC 12 V IN connector (DC INPUT)

Use this 4-pin Cannon XLR connector for supplying 12 V DC from the optional AA-P250 or ***AA-P200** AC power adapter. (*U-Version only)

Pin No.	Function
1	GND
2	
3	
4	-12 V

21 Camera cable connector (VTR/RM)

Connector for connecting the cable from the recorder, etc. selected by switch 18.

22 GENLOCK signal input connector (GENLOCK IN)

Input connector for a composite video or black burst external reference signal. This allows synchronization with other video devices.

23 Test output connector (TEST OUTPUT)

The signal selected by the internal "PIX SELECT" switch is output here. Either composite video signal (VBS), or B, G, R signals can be selected as an output. This is factory-preset to the composite video signal (VBS) output.

24 Exclusive microphone mounting shoe

Shoe for mounting the exclusive microphone M-K50 (monaural type) or MV-P602 (stereo type).

25 Exclusive microphone input socket (MIC INPUT)

Input socket for the exclusive microphone.

26 Mic input socket (MIC INPUT)

Input socket for the microphone with a 3-pin XLR connector. The input is parallel with MIC connector 25.

27 Mic output select switch (MIC MODE)

This switch must be set to "MONO" position.

28 VF AUX video select switch (RET)

When the VTR is set to the playback mode with the 14-pin type VTR connected to camera cable connector 21, if this switch is set to ON, the playback picture can be monitored in the viewfinder. This serves the same function as the RET switch on the lens.

29 Power select switch (POWER)

Permits power on/off and selection of power supplies.

RM/VTR: Set to this position when power is fed from the remote control unit (RM-P200) or portable VTR through the camera cable.

OFF: The power to the camera will be completely set to OFF.

DC INPUT/: Set to this position when the AC power adapter (***AA-P200** or AA-P250)/4-pin XLR or the battery pack (DC-C11 or NB-G1) is used. (*AA-P200: U-Version only)

30 Intercom level (INTERCOM LEVEL)

Can control the volume level of the camera's intercom headphone.

31 Y/C 358 (U-Version)/443 (E-Version) output connector

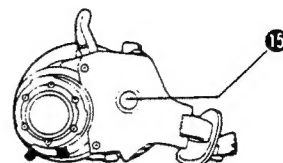
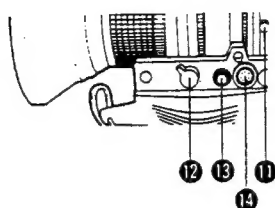
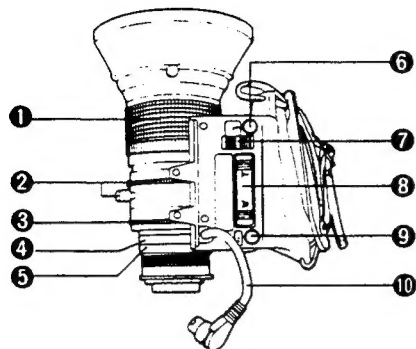
Y/C signals are output when camera cable select switch 14 is set to "Y/C 358 (443)". A unit with a 7-pin connector input (S-VHS VTR, etc.) can be connected here

32 Intercom jack (INTERCOM)

33 Zebra button (ZEBRA)

Switches the zebra pattern video level indicator on the viewfinder ON/OFF.

Zoom Lens (HZ-516B, optional)



1 Focus ring

Focus adjustment ring.

2 Zoom lever/zoom ring

Ring and lever for manual zooming.

3 Iris ring

When the iris mode switch 7 is set to "M" (manual), the iris can be opened and closed manually using this ring. When it is set to "A", the iris is adjusted automatically.

4 Back focus ring

For the back focus adjustment, turn this ring.

5 Macro ring

If the ring is turned fully in the direction of the arrow, macro shooting at a distance of about 9 cm from the subject will be possible.

6 Momentary iris switch

Even during the manual iris operation with the iris mode switch set to "M" (manual), iris control can be automatic as long as this button is kept depressed.

7 Iris mode switch

A: For auto iris operation and remote operation (with RM-P200).

M: For manual iris operation.

R: This position cannot be used.

8 Zoom servo lever

The speed and direction of the servo zooming is controlled by this see-saw switch.

9 Return switch (RET)

The return video signal from the VTR can be monitored in the viewfinder while this switch is depressed.

10 Lens cable

Connect the lens connector on the camera head.

11 Securing knob

For fixing back focus ring 4.

12 Zoom mode knob (ZOOM)

S: For power zooming.

M: For manual zooming.

13 Focus servo connector

For connecting the optional focus servo unit.

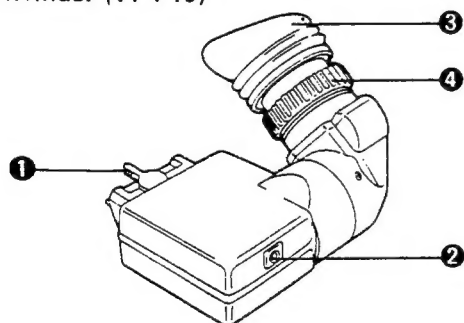
14 Zoom servo connector

For connecting the optional zoom servo unit.

15 VTR switch (VTR)

For the start/stop operation of the VTR.

Viewfinder (VF-P10)



1 Slide lock lever

After the viewfinder has been attached to the camera, the viewfinder can be slid to the left and right (by 40 mm) if this lever is loosened.

2 Tally lamp

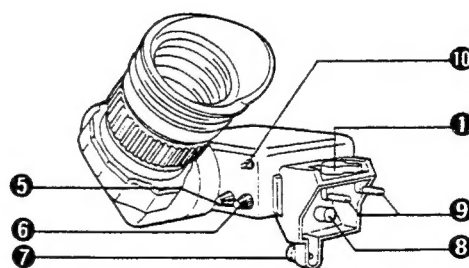
When the camera is used connected to a portable VTR, this LED comes on to indicate the recording mode. To switch it off, set switch 10 to OFF.

3 Eyepiece

Focusing adjustment is possible.

4 Eyepiece fixing ring

Loosen and adjust the eyepiece back and forth to match your vision.



5 Contrast control (CONT)

6 Brightness control (BRIGHT)

7 Lock screw

Use to lock the viewfinder onto the camera.

8 VF connector

Directly connected to the video camera.

9 Viewfinder fixing pins

Insertion pins for use in attaching to the video camera.

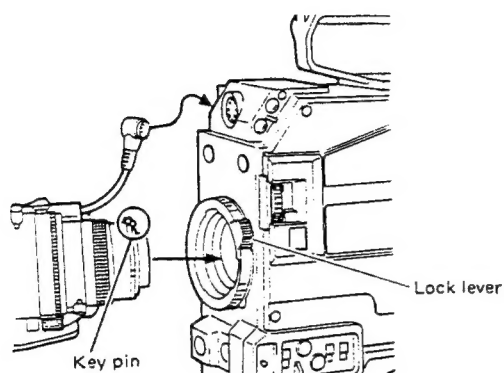
10 Tally switch (TALLY)

Turns the top tally lamp 2 off even when the camera (VTR) is recording. The REC indicator inside the viewfinder will be kept ON.

INSTALLATION

Lens Installation (Optional HZ-516B)

- 1 Be careful of the key pin of the lens and slot of the mount ring groove, then insert the lens flange into the mount groove firmly.
- 2 Turn the lock lever clockwise to fix the lens.
- 3 Connect the lens cable to the camera head.

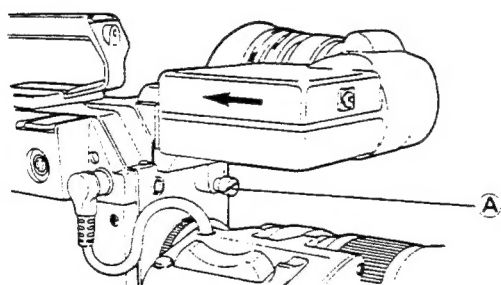


Note:

Make sure that the lens is firmly attached. Otherwise, the back focus adjustment may be incorrect.

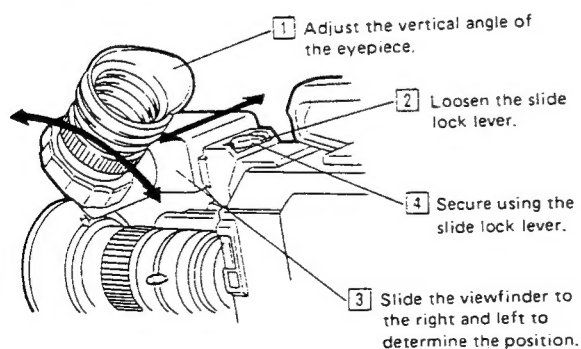
Viewfinder Installation (VF-P10)

- 1 Mate the viewfinder fixing pin with the mounting hole of the camera head, then insert.
- 2 Insert it all the way, then confirm that the viewfinder has been positively connected and turn viewfinder fixing screw A clockwise to lock it.

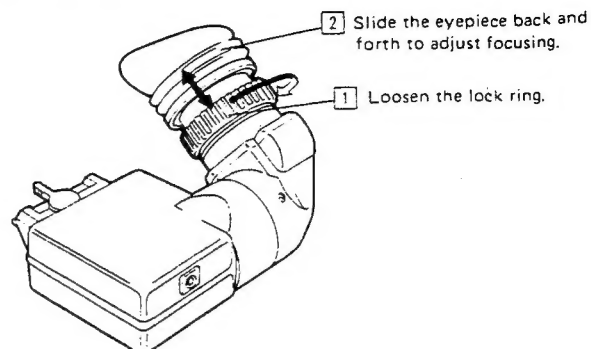


• Eyepiece adjustment

- Vertical angle and left/right slide adjustment



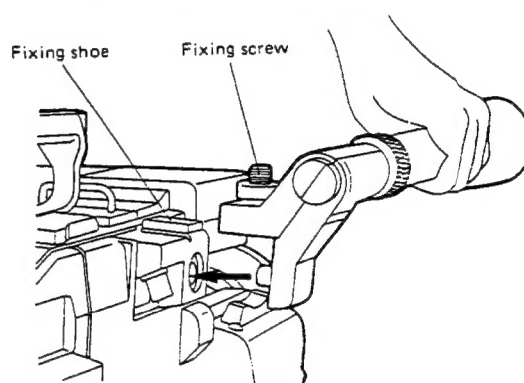
• Focusing adjustment



Microphone Installation

Exclusive microphone (M-K50 or MV-P602, optional)

- 1 Insert the microphone into the mic holder fixing shoe on the right top of the camera.
- 2 Secure the microphone using the fixing screw.



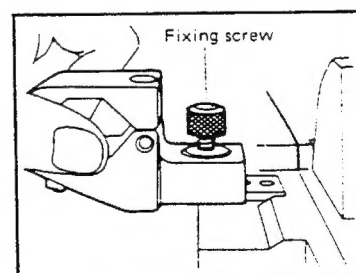
Note:

- Lens motor noise or mechanical friction noise may be picked up by the microphone and recorded. Check possible noise conditions in advance.

Ordinary microphone

Install the microphone onto the camera head using the optional mic holder (Part No. SCUA30312, service parts).

- 1 Insert the mic holder into the mic holder fixing shoe on the right top of the camera, then fix it using the fixing screw.



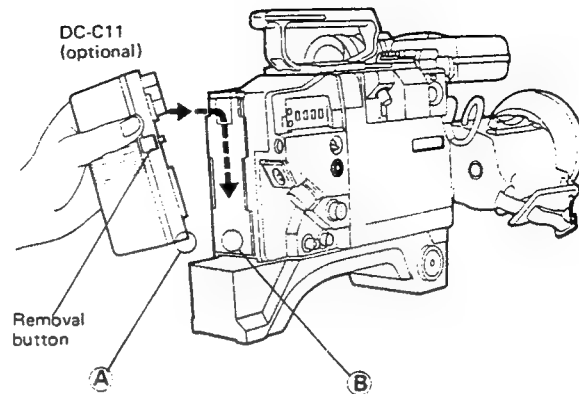
- 2 Connect the microphone output to the MIC connector on the camera head.

Battery Pack (DC-C11, optional) Installation

- 1 Press battery pack guide **A** onto **B** on the battery guide, then press it firmly to the camera using **B** as the reference. Match the battery pack guide with the battery guide, then press it down until it is locked.
- 2 To remove the battery pack, slide the removal button towards you, then move the battery pack upward.

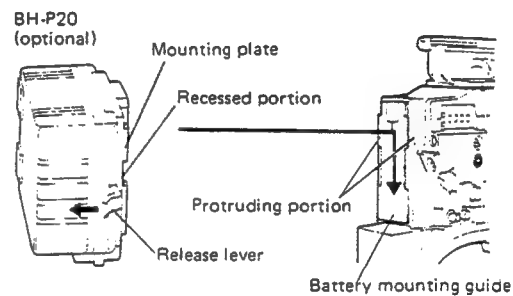
• Battery pack

- With a fully-charged DC-C11 battery pack, the camera will operate for approx. 70 minutes at normal temperatures (about 25°C (77°F)).
- Be sure to charge the battery pack before recording. It is also recommended to have some spare charged battery packs ready.
- Replace the battery pack when the BATT indicator in the viewfinder starts flickering.
- Use the optional AA-P250 AC power adapter to charge the battery pack. For the charging procedure, refer to the AA-P250's instruction manual.



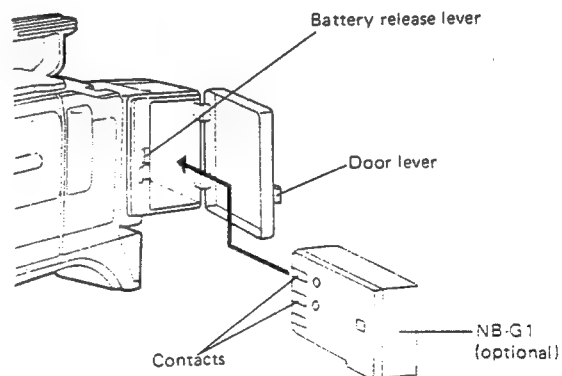
Battery Holder (BH-P20, optional) Installation

- 1 Aligning the recessed portion of the mounting plate of the BH-P20 with the protruding portion of the battery mounting guide on the back of the camera. Push the BH-P20 down until it locks.
- 2 To remove the BH-P20, push the release lever, slide the BH-P20 up.



Inserting the NB-G1 battery pack (optional)

1. Open the compartment door by pushing the door lever away from the BH-P20.
 2. Insert the NB-G1 battery pack with its contacts facing the camera, as illustrated. When properly inserted, the battery pack will automatically be locked by the battery release lever.
- To remove the battery pack, push the battery release lever away from the BH-P20; the battery pack will be unlocked so it can be removed.

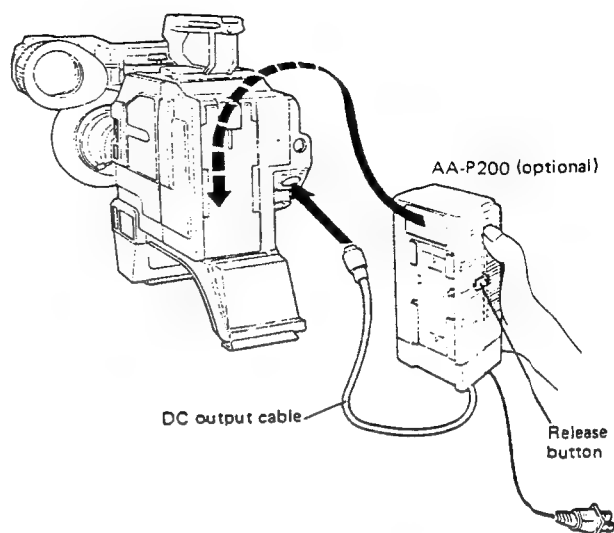


AC Power Adapter **AA-P200** (optional) Installation

- AA-P200: U-Version only

This describes mounting method when the AC power adapter AA-P200 is used which can be directly mounted onto the KY-25/KY-H25.

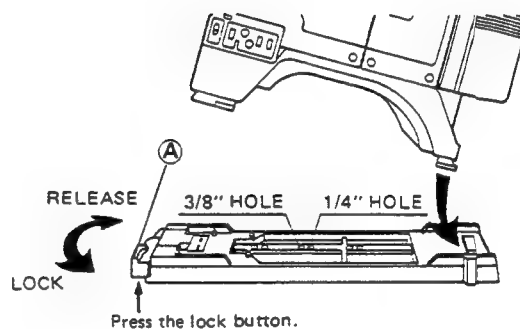
- 1 As shown, insert the power adapter into the battery guide on the back of the camera head from above, then press it down.
- 2 Connect the AA-P200 DC output cable to the DC IN connector on the camera head.
- To remove the power adapter, pull it upward while pressing the release button.



Tripod Installation

In the case of the KY-25 (using the KA-500X tripod base)

- 1 Use either the 1/4" or 3/8" holes to match the tripod used, select the front, middle or rear holes of the camera for maximum balance, and taking its center of gravity into consideration.
- 2 While pressing the lock button, set lock lever **A** to its released position (turn it clockwise).
- 3 After engaging the notch on the rear of the camera with that of the tripod base, place the camera on the tripod base.
- 4 While pressing the lock button, set lock lever **A** to its locked position by turning it to secure the camera.

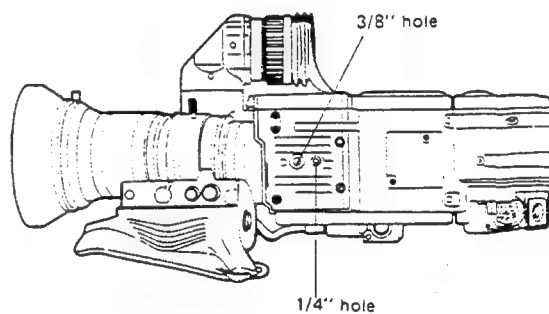


Caution:

When rotating the lock lever, turn it while holding the camera's handle with one hand. Turn the lever slowly to prevent the camera from dropping off the tripod.

In the case of the KY-H25

As shown on the right, the 1/4" and 3/8" holes are provided on the bottom of the KY-H25. Use these in accordance with the tripod used.



POWER SOURCES

There are four methods of powering the KY-25 and KY-H25 as described below.

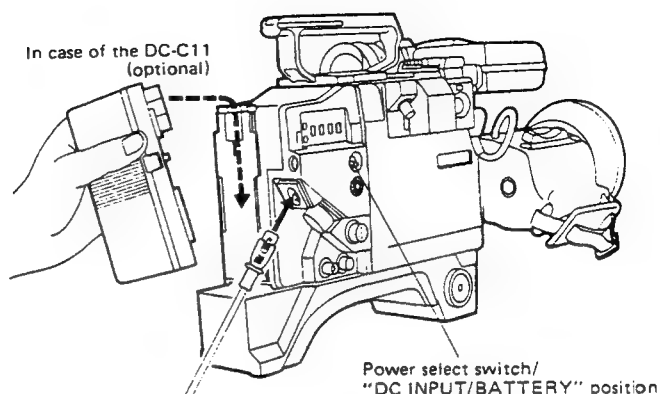
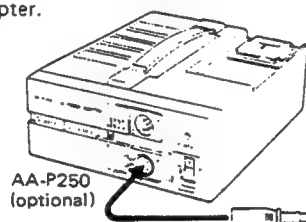
- (1) Power from the battery pack (DC-C11 or NB-G1) or AC power adapter (*AA-P200). (*U-Version only)
- (2) Power from the AC power adapter (AA-P250).
- (3) Power from a portable VTR.
- (4) Power from the remote control unit (RM-P200).

Power from the DC-C11/NB-G1 (battery pack) or *AA-P200 (AC adapter) (AA-P200: U-Version only)

- 1 Install the DC-C11, NB-G1 or *AA-P200 to be used to the KY-25/KY-H25. (Refer to the installation method on pages 7 and 8.)
- 2 If the power select switch on the camera head is set to the "DC INPUT/BATTERY" position, power is fed to the camera head.

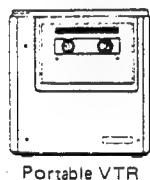
Power from the AA-P250 (AC power adapter)

- 1 Connect the KY-25/KY-H25 to the AA-P250 using the power cable supplied with the adapter.
- 2 If the power select switch on the camera head is set to the "DC INPUT / BATTERY" position, power is fed to the camera head.



Power from a portable VTR

- 1 Connect the camera to the VTR using a VTR cable which matches the VTR used. (Refer to page 10.)
- 2 When a VTR with a composite or component (Y, B-Y, R-Y) input is used, set the camera cable select switch on the camera head to the "VTR" position. When an S-VHS VTR is connected, set the switch to the "Y/C 358 (Y/C 443) position.
- 3 When the power select switch on the camera is set to the "RM/VTR" position, power is fed to the camera head.



VTR cable (optional)

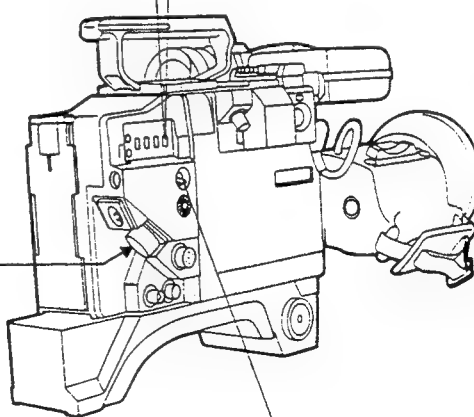


Caution:

If the camera is operated from the battery in the portable VTR, the battery operation time could be very short due to the small capacity of the battery. The power supply to the camera should not exceed the rated current capacity of the VTR.

Camera cable select switch:

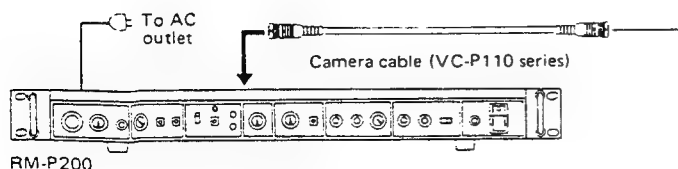
- Set to the "VTR" or "Y/C 358 (443)" position for the correct VTR being used.
- Set to the "RM" position when power is fed from the RM-P200.



Power select switch "RM/VTR" position

Power from the RM-P200 (remote control unit)

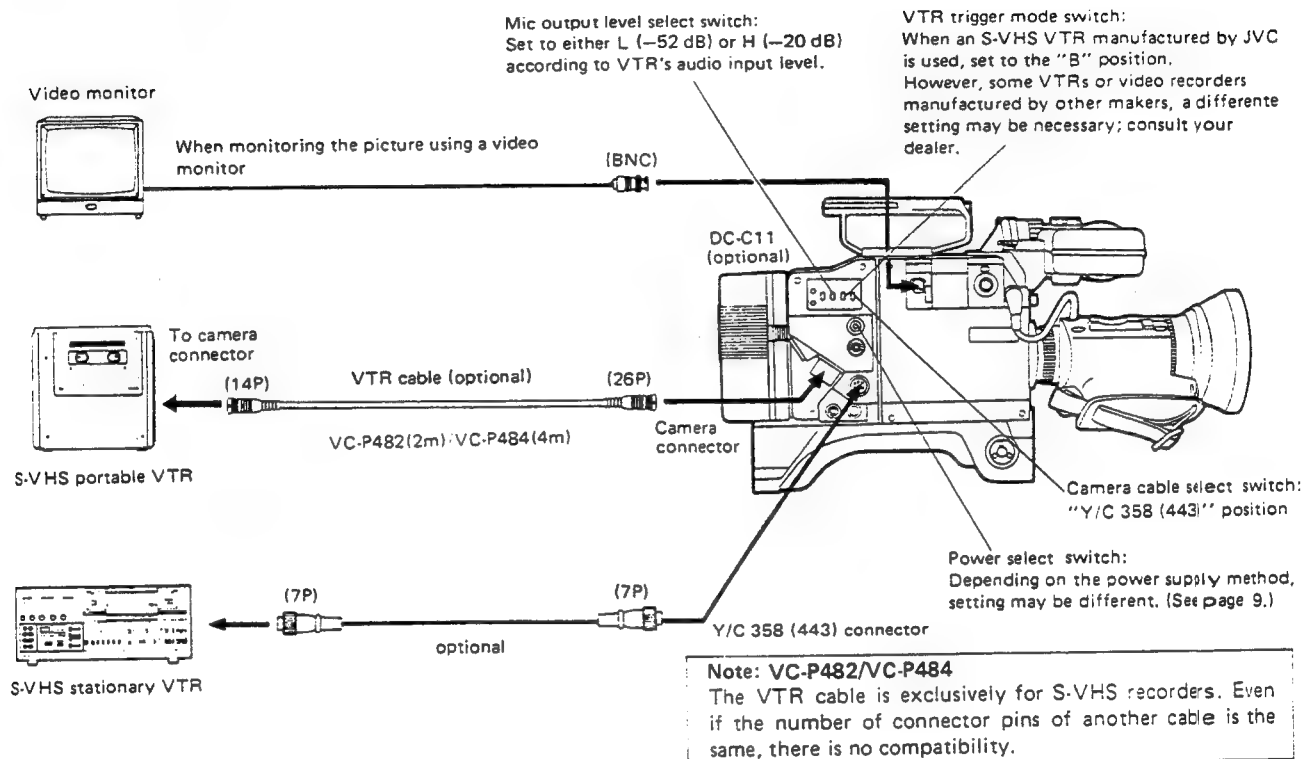
- 1 Using the remote control cable (VC-P110 series), connect the camera head to the RM-P200.
- 2 Set the camera cable select switch to the "RM" position.
- 3 When the power select switch on the camera is set to the "RM/VTR" position, power is fed to the camera head.



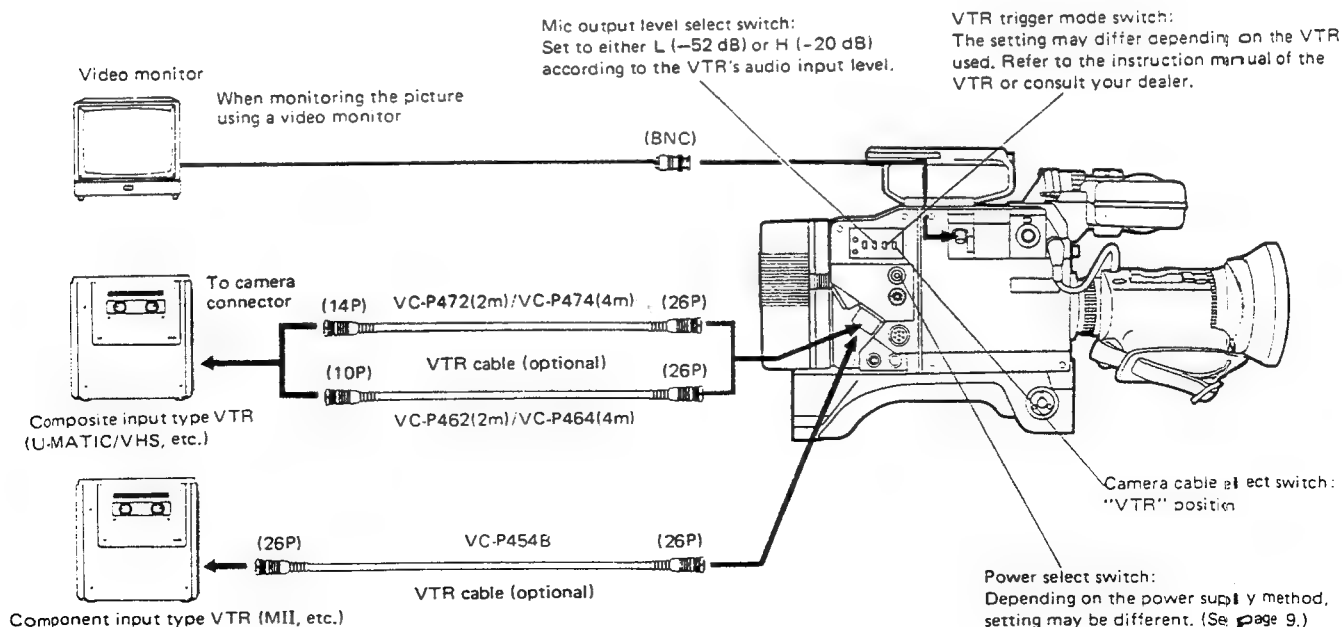
CONNECTION TO VIDEO RECORDER

Before making connections, be sure that the power of the camera and units used is set to OFF.

• Connecting to a VTR with the Y/C inputs (S-VHS video recorder)



• Connecting to a VTR with the composite input (U-VCR/VHS, etc.) or component input (MII, etc.)



BEFORE SHOOTING

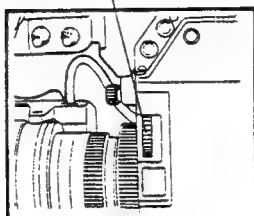
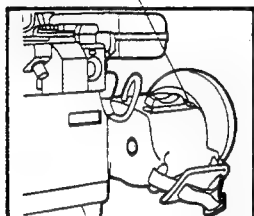
To record a clear picture with correct colors, it is necessary to adjust the back focus and auto setup.

Once the back focus is adjusted at the time of lens installation, subsequent adjustment is basically not necessary. However, with auto setup adjustment, be sure to adjust it in advance

every time shooting is done. Prior to adjustment, connect the VTR, TV monitor, etc. in accordance with the prescribed connection methods, then set up camera switches and controls as shown below.

1. PREPARATION

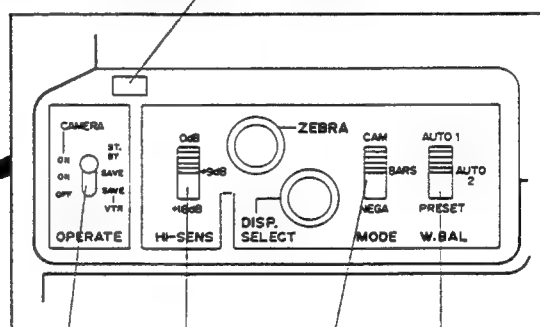
- 1** Iris mode switch: AUTO
- 2** Filter disk: Set according to the table on the right.



Filter indication	Color temperature	Shooting conditions
1	CLOSE	When the camera is not used
2	3200K	Sunrise or sunset, studio lighting
3	5600K	Outdoors; cloudy or rainy weather
4	5600K + 12.5% ND	Outdoors; bright or direct sun

- 3** Set the switches as shown below.

If the LED does not glow in red, no power is fed to the camera. Supply power by referring to page 9.



Operation switch: ON/ST-BY (or ON/SAVE)
 HI-SENS switch: 0 dB
 ZEBRA
 DISP. SELECT
 CAM MODE
 W-BAL switch: AUTO 1 or AUTO 2
 Camera/color bar select switch: CAM

Upon completion of setting, point the camera at an appropriate object, then operate the lens focus lever and zoom lever and monitor the picture in the viewfinder screen or monitor TV screen.

2. BACK FOCUS ADJUSTMENT

Perform this adjustment while observing the TV monitor or viewfinder.

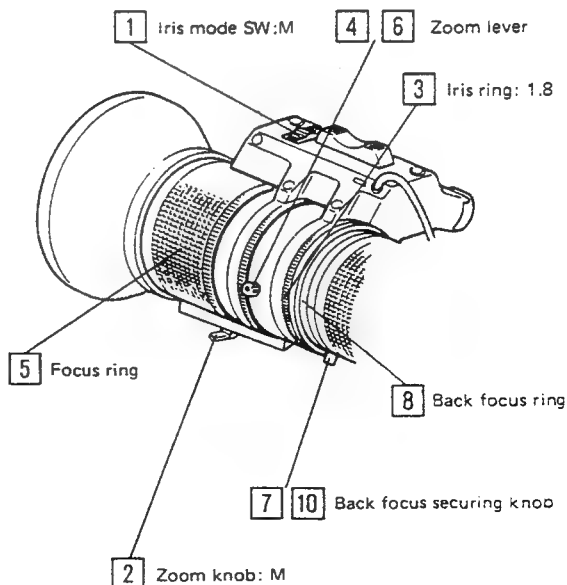
- 1** Set the iris mode switch on the lens to the "M" position.
- 2** Set the zoom knob on the lens to the "M" position.
- 3** Set the iris ring to "f1.8" (open).

At this time, if the lighting is too strong, reduce lighting or move to a dark place.

- 4** Fully turn the zoom lever to the TELE position.
- 5** Bring into focus using the focus ring.
- 6** Fully turn the zoom lever to the WIDE-angle position.
- 7** Loosen the back focus securing knob.
- 8** Turn the back focus adjustment lever, then adjust it to a position where the focusing is best.
- 9** Perform fine-tuning by repeating steps **4** to **8** a few times.
- 10** Finally, tighten the back focus securing knob.

Note:

The back focus adjustment is more accurate when the distance between the subject (pattern) and camera is more than 3 m (10 ft.).

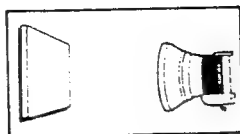


3. AUTO SETUP ADJUSTMENT (BLACK/WHITE BALANCE ADJUSTMENT)

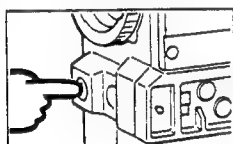
- Start adjustment following steps 1 to 3 (Refer to "1. PREPARATION") described previously.

- Auto setup will be performed in the order of black, white and black for adjustment of balance.

- 4** Shoot a white object (cloth, wall, etc.) so as to fill the viewfinder screen.



- 5** Hold the auto setup button depressed for longer than one second.

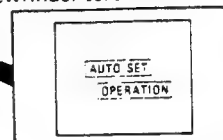


Note:

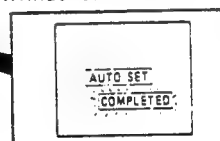
If the duration in which the auto setup button is being pressed is shorter than one second, only the white balance will be adjusted. Be sure to keep the button depressed for longer than one second for adjustment of the setup. For auto white balance, refer to page 13.

- 8** This completes the setup adjustment. The white balance state is automatically held in the built-in memory circuit.

- 6** The auto setup operation will start, and the following indication will appear in the viewfinder screen.



- 7** Upon completion of the setup adjustment, "COMPLETED" will be indicated flashing for about 4 seconds in the viewfinder screen.

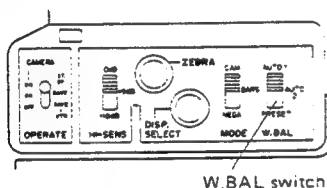


NOTE

- White balance memory**

The KY-25 and KY-H25 have two built-in white balance memory circuits and different color temperature states can be stored in memory, individually.

If the above auto setup adjustment is performed with the W.BAL switch set to "AUTO 1". The white balance state will be held in memory "AUTO 1". Likewise, if it is done with the switch set to "AUTO 2", it will be held in memory "AUTO 2".



W.BAL switch

- Display in the viewfinder**

If the above auto setup adjustment has not been done correctly, the "COMPLETED" indication as described in 7 above will not appear in the viewfinder screen.

Instead, the following error message or more light message will appear.

If the error message appears, check for the following causes and items, then perform auto setup adjustment again.

Note:

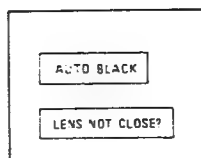
- The error message and more light message will flicker in the screen for about 4 sec. as will in the "COMPLETED" indication. After 4 sec. it goes out. Pay attention to the contents of the indication.

- Error message during auto black balance**

LENS NOT CLOSE?

Cause: The lens does not perform auto operation.

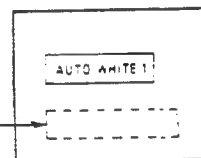
Remedy: Check for lens cable connection.



(Display)

- Error message during auto white balance (including the more light message)**
(The display shows an example in which the W.BAL switch is set to "AUTO 1".)

Error message or more light message (Display)



- Error messages**

LOW LIGHT ERROR

Cause: Insufficient amount of light.

Remedy: Increase lighting or increase sensitivity using the HI-SENS switch. (If the sensitivity is increased, the S/N ratio will deteriorate.)

OBJECT ERROR?

Cause: The subject shot is not suitable.

Remedy: Check if the subject is a white object and change the subject if necessary.

OVER LIGHT ERROR

Cause: The incident light is too strong. The color temperature filter is not suitable.

Remedy: 1. Check to see if strong light such as sunlight or its reflection from the subject is directly introduced to the video camera.
2. Set the filter to the correct position.

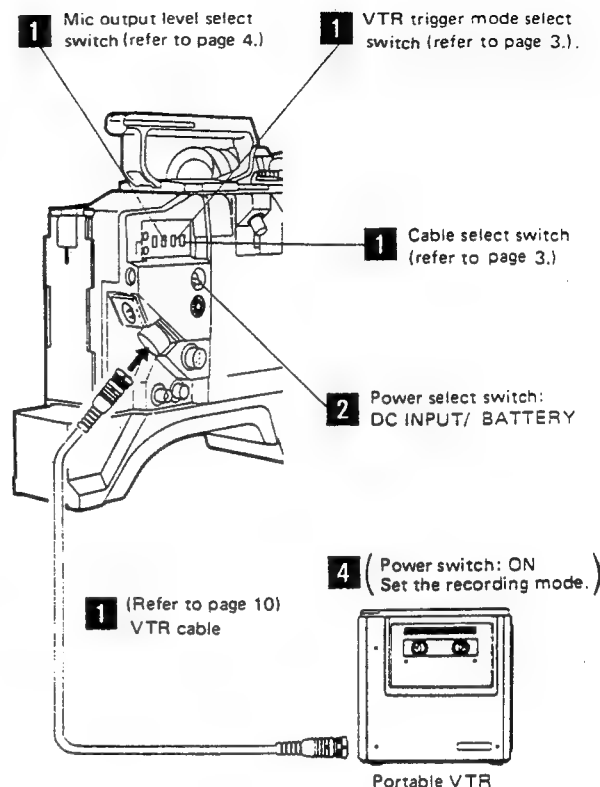
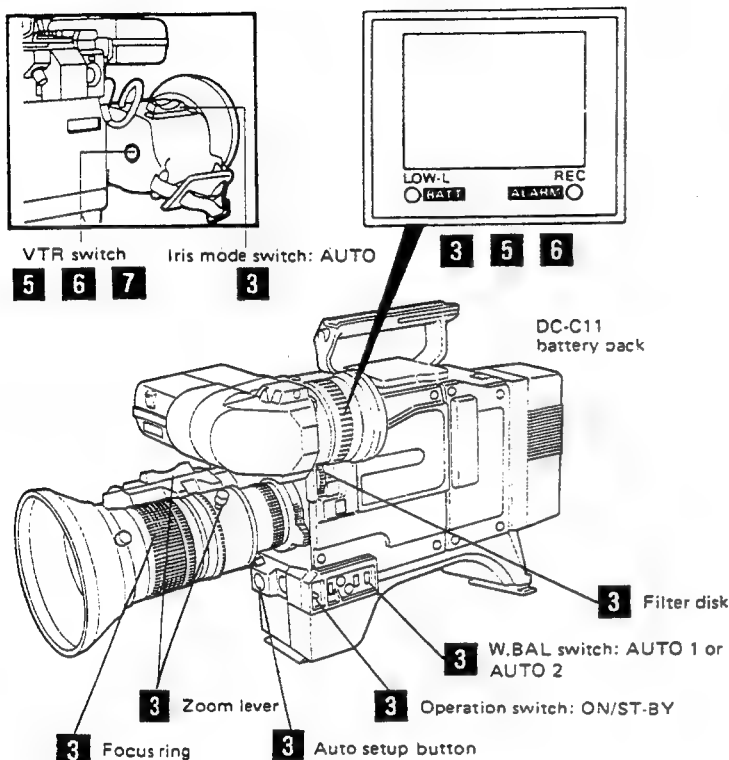
- More light message**

MORE LIGHT

This message is somewhat different from an error message. The "MORE LIGHT" indication appears when the amount of light is insufficient, indicating that the white balance has been automatically adjusted to a level detrimental to shooting. Although this situation may not be wrong, it is recommended that the amount of light be increased.

OPERATION

Recording using a portable VTR (When the DC-C11 is used)



Preparation for recording

(The following steps, numbered 1 through 7, correspond to the numbers in the illustrations above, showing controls and switches to be operated in respective steps.)

- 1 Connect the portable VTR following the connection method given on page 10.
- 2 Supply power to the camera following the power supply method given on page 9.

Note:

When the BATT indicator or "BATT EMPTY?" display in the viewfinder flickers, the battery pack is nearly exhausted; replace with a fully-charged battery pack.

- 3 Perform auto setup adjustment following "Before shooting" on page 12.
- 4 Set the VTR to the recording mode.
For the operation of the VTR, refer to the instruction manual of the VTR.
- 5 When the tape in the VTR starts moving, press the VTR switch on the lens.
The VTR enters the recording pause mode.
This completes the preparation.

Recording

- 6 When the VTR switch on the lens is pressed, recording will commence. At this time, the REC lamp in the viewfinder comes on.
- 7 To stop recording, press the VTR switch again.
The VTR stops in the recording pause mode. The REC lamp goes out.

Power-save function of the VTR

If a 14-pin VTR (example: CR-4900) with a power save circuit is used, the power of the VTR can be saved during the interval from the recording pause to the restart of recording.

Operate as in the following:

- 1 Upon completion of the preparation for recording, set the operation switch to the "ON/SAVE" position.
The Upper Drum of the VTR will be switched off in the recording pause mode.
- 2 To start recording, set the operation switch to the "ON/SAVE" position.
The Upper Drum of the VTR will be switched on and the VTR enters the recording pause mode.
- 3 When the VTR switch on the lens is pressed, recording will start.

White balance adjustment

If the camera is moved from indoors to outdoors or vice versa, the type of light source changes. This requires readjustment of white balance.

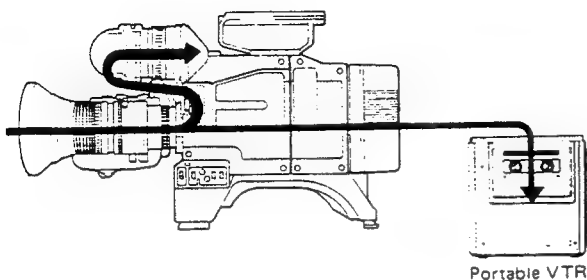
White balance can be adjusted by following the same procedure as described in "AUTO SETUP ADJUSTMENT" on page 12, but the way the auto setup button is pressed differs. For adjustment of white balance, press the auto setup button once and release it immediately. Be careful not to keep it depressed, otherwise the auto setup adjustment mode will be engaged.

The display in the viewfinder shows **AUTO WHITE**, instead of **AUTO SET**. The rest is the same as for auto setup adjustment.

Monitoring the picture

When the camera is connected with a portable VTR using the VTR cable, the picture can be monitored in the viewfinder.

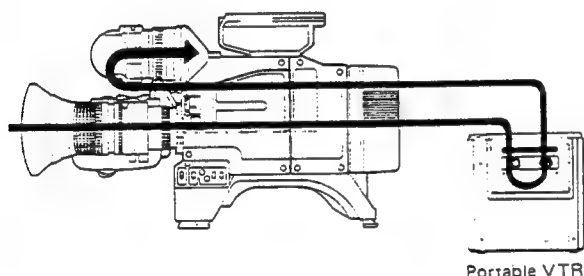
Monitoring the picture from the camera



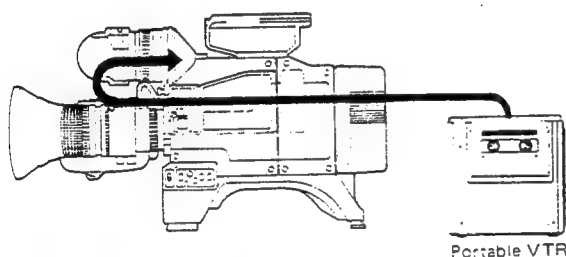
Monitoring the E-E mode picture from the VTR

While the return button (RET) on the lens is held depressed, or when the RET video switch on the portion of the camera where the microphone is mounted is set to the "ON" position, the return video signal can be monitored.

However, unless the VTR used has a return video signal function this is not possible. (This is impossible with a 10-pin type VTR.)



Monitoring the VTR playback picture



- For the playback operation of the VTR, refer to its instruction manual.

Contour (contour compensation) ON/OFF switch

To provide a sharper image, this camera has a built-in 2H contour compensation circuit for both vertical and horizontal signals. This circuit is factory-preset to ON.

The position of the contour switch can be confirmed in the character display. For details, refer to the character display description on page 15.

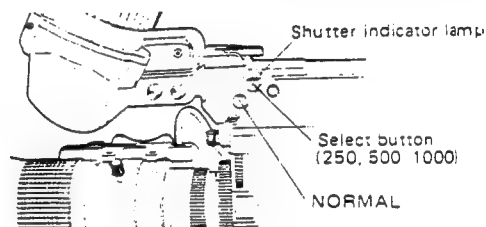
To switch off the contour compensation, remove the side cover on the right of the camera, set the CONTOUR switch on the internal CP board to "OFF". For detailed operation, consult your dealer.

Electronic shutter

This function goes a long way when analyzing the motion of a fast moving object, etc. The position can be changed in 3 steps: 1/250, 1/500 and 1/1000, in addition to normal*1/60 sec.

As the shutter speed is made faster to 1/250, 1/500 and 1/1000, the sensitivity will drop; therefore, shooting in a dark place is not possible. For selection, use the shutter speed select buttons (two) on top of the filter turret to the right side of the camera.

When the power of the camera is switched "ON", *1/60 sec. is set as an initial setting. At this time, the shutter indicator lamp shown below does not light. (*E-Version: 1/50 sec)



• Selecting the shutter speed

To change the shutter speed, press the upper button (250, 500, 1000) of the two buttons.

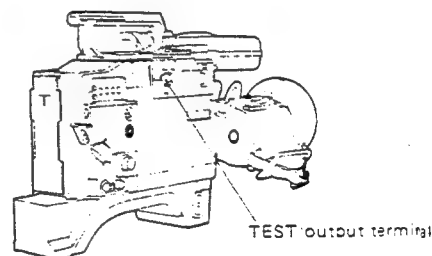
The shutter speed will change from 1/250, to 1/500 to 1/1000 sequentially every time this button is pressed and cycle in a loop. At this time, the shutter indicator lamp will come on. To set to the normal *1/60 sec., press the lower button (NORMAL) of the two to return to the initial state.

The shutter speed setting can be confirmed by observing the viewfinder screen using the character display function of this camera.

For the display indication, refer to the character display indication on page 15. (*E-Version: 1/50 sec)

Selecting the TEST OUT signal

The TEST output terminal on the left of the camera is factory-preset so that the composite video signal (VBS) is output. However, it is also possible to output any one of R, G, or B signal by internal switch. (* R, G or B signal does not have a color component. Therefore, even if it is connected to a color monitor, it appears as a monochrome signal on the screen.)



To switch this, remove the side cover on the right of the camera, then change the setting of the "PIX SELE CT" switch on the internal CP board. When the test output signal is changed, the signal to be monitored on the viewfinder screen is also changed accordingly.

For further detailed operation, consult your JVC-authorized dealer.

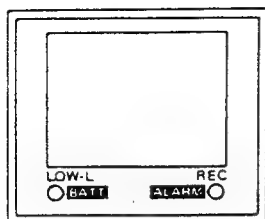
The type of signal to be output to the TEST output terminal can be confirmed in the viewfinder screen using the display function of this camera.

Refer to the character display indication described later.

WARNING INDICATION AND CHARACTER DISPLAY

Warning indication using LEDs

The viewfinder includes the following indicator lamps, giving a warning during shooting.



- **LOW-L/BATT (red)**

LOW-L: Lights when the camera's video output is too low. Even if the lamp is lit, recording can be done but the picture will be dark; however, this indicates that additional lighting is necessary.

BATT: Flashes when the battery in the camera or VTR (depending on the VTR used) is almost exhausted.

- **REC (green)**

REC: The REC (recording) lamp lights interlocked with the indicator lamp in front of the viewfinder.

ALARM: Flashes when the VTR connected to the camera has trouble or the tape comes to the end (depending on the VTR used).

Note:

The above warning functions depend on the VTR connected. Refer to the VTR's instruction manual.

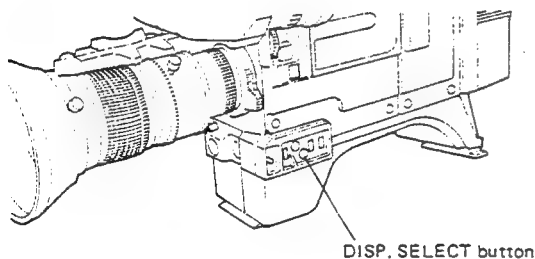
Character display indication

The display indications include the STATUS indication, MODE indication and WARNING indication; the details of each are as follows:

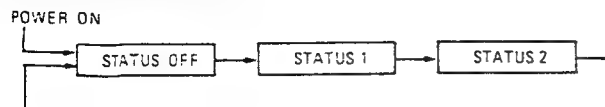
1 STATUS indication

Various control switches and their settings are indicated by characters.

There are two display screens, which can be selected using the DISP. SELECT button.



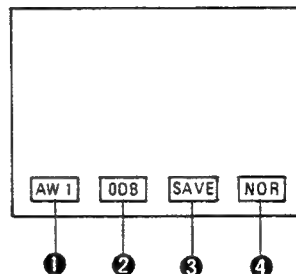
The DISP. SELECT button is a push-button switch, which changes as follows every time it is pressed.



The STATUS OFF indicates no-indication state, to which setting the display is always initialized when the operation switch is switched ON from OFF.

STATUS 1 indication

The following display appears in STATUS 1 mode.



1 Position indication of the W.BAL switch

PRE: Indicates that the W.BAL switch is set to the "PRESET" position. The white balance of the camera is set to the preset (3200K) state and the auto setup function cannot be activated.

AW 1: Indicates that the W.BAL switch is set to the "AUTO 1" position. The white balance of the camera is set to the balance which is held in the "AUTO 1" memory of the camera.

If the auto setup adjustment is made while this is indicated, the white balance will be automatically adjusted and the balance at this point will be rewritten to the AUTO 1 memory.

AW 2: Indicates that the W.BAL switch is set to the "AUTO 2" position. Just as in the above AUTO 1, the white balance of the camera is set to the balance stored in the "AUTO 2" memory. If the auto setup adjustment is made while this is indicated, the AUTO 2 memory will be rewritten.

MANU: This is indicated if the optional remote control unit RM-P200 is connected and its W.BAL switch is set to the MANUAL position. Note that the auto setup adjustment or auto white balance adjustment cannot be done from the camera.

* For the auto setup adjustment, refer to page 12.

2 Position indication of the HI-SENS switch

0 DB: Indicates that the HI-SENS switch is set to the "0 dB" position.

9 DB: Indicates that the HI-SENS switch is set to the "+9 dB" position.

18 DB: Indicates that the HI-SENS switch is set to the "+18 dB" position.

3 Indication of the VTR mode

SAVE: Indicates that the VTR is in the SAVE mode.

STDBY: Indicates that the VTR is in the ST-BY mode.

REC: Indicates that the VTR is in the REC mode.

Note:

"SAVE" indication is only when a 14-pin VTR with a power save facility is used. Nothing is indicated when a VTR other than this is used.

④ Electronic shutter speed indication

NOR : Indicates that the shutter speed is set to *1/60 sec.
(E-Version: 1/50 sec)

250 : Indicates that the shutter speed is set to 1/250 sec.

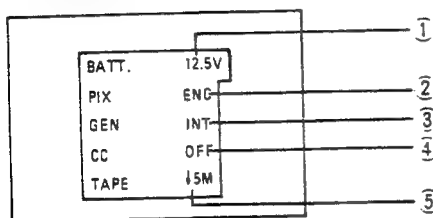
500 : Indicates that the shutter speed is set to 1/500 sec.

1000 : Indicates that the shutter speed is set to 1/1000 sec.

* For changing the electronic shutter speed, refer to page 14.

STATUS 2 indication

The following display appears in the STATUS 2 mode.



① Battery voltage indication

The battery voltage will be indicated digitally.

② Signal indication of TEST OUT/VF OUT

The type of video signal appearing at the camera's TEST OUT terminal and viewfinder screen is indicated.

PIX ENC: The encoder output (Composite) signal is output.

PIX R: The red signal is output.

PIX G: The green signal is output

PIX B: The blue signal is output.

Note:

- The camera is factory-preset to the "PIX ENC" position. To obtain another signal output, change the setting of the "PIX SELECT" switch inside the camera. (Refer to page 14.)
- When the foregoing PIX R, PIX G or PIX B signal is output, the signal does not have a color component. Therefore, even if it is connected to a color monitor, it appears as a monochrome signal on the screen.

③ GENLOCK mode indication

Indicates the genlock mode of the camera.

GEN INT: Operates by the internal SSG (sync signal generator) of the camera (INT mode).

GEN EXT: Indicates that the camera is genlocked to an external signal (EXT mode).

* As for the connection with the external signal source in the EXT mode, refer to page 17.

④ Contour indication

CC ON: The contour compensation is being made.

CC OFF: The contour compensation is not being made.

* To switch ON or OFF the contour compensation, use the internal switch. For its operation, refer to page 14.

⑤ Remaining tape indication

When the amount of remaining tape in the VTR becomes low, the remaining time is indicated. This is indicated only when the VTR used has a tape remaining detection circuit and can output a signal to the camera.

TAPE 10M: When the tape remaining time becomes less than 10 minutes, this is indicated.

TAPE 5M: When the tape remaining time becomes less than 5 minutes, this is indicated.

* When the remaining tape time is 10 minutes or more, nothing is indicated.

② MODE indication

The execution mode during the auto setup adjustment and auto white balance adjustment will be indicated.

When the auto setup button is pressed, if the status indication is displayed, it will disappear, and be replaced by the mode indication.

Upon completion of the auto setup operation or auto white balance operation, the results will be indicated for about 4 seconds, then the original status indication will be resumed.

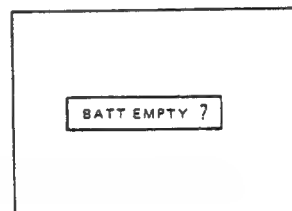
For the details of the execution mode indication, refer to "auto setup adjustment" on page 12.

③ WARNING indication

When the battery is exhausted, the following indication will flash.

This indication will supersede other indications (STATUS and MODE).

When this indication appears, replace the old battery pack with a fully-charged battery pack as soon as possible.



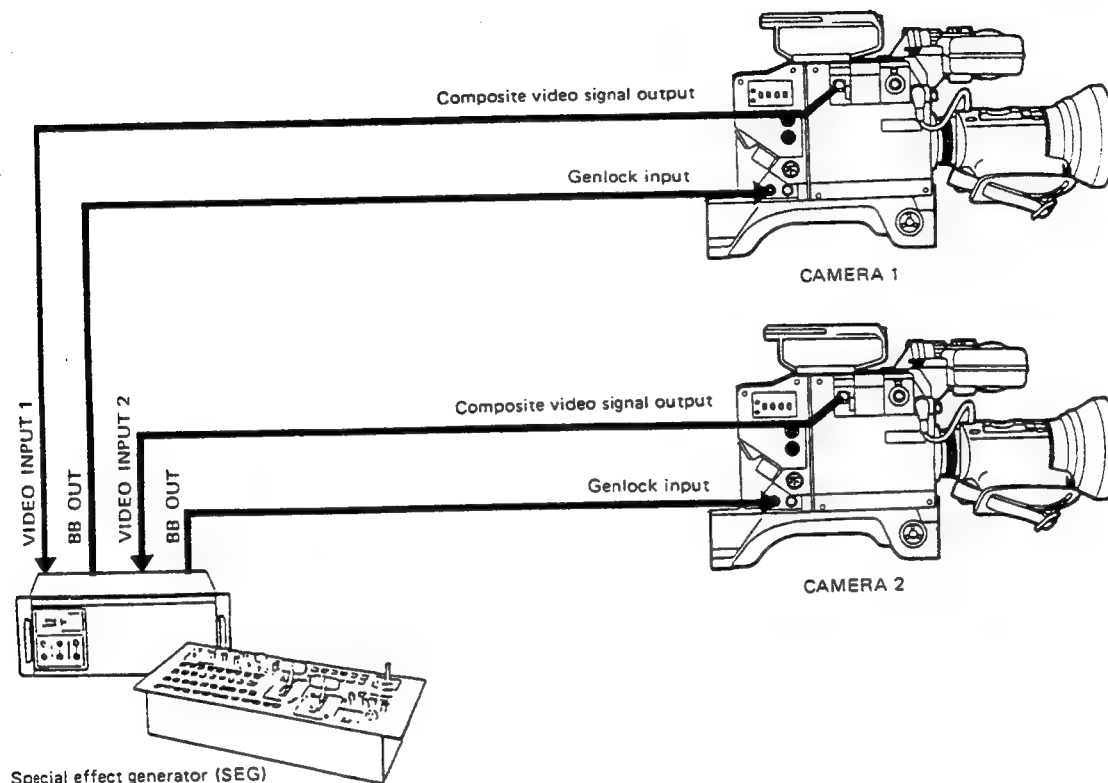
TROUBLESHOOTING

- Auto setup or auto white balance adjustment cannot be completed.
 - Is the filter turret correctly set?
 - Is the subject you are shooting a colored object?
- Auto setup or auto white balance adjustment cannot be performed.
 - No display appears in the viewfinder screen.
 - Are you pressing the RET button on the lens?
 - Is the camera's RET switch set to ON?
 - Are you monitoring the VTR playback picture?
- Viewfinder screen is darker, or no raster appears.
 - Scenes being shot are not visible in the viewfinder.
 - Are the viewfinder's contrast and brightness controls set properly?
 - Is the filter turret correctly set? Is the lens iris closed?
 - Is the camera's RET switch set to ON?

GENLOCK OPERATION

When pictures from more than one camera are processed (fade-in, fade-out, mix/wipe) using a special effect generator (SEG), etc., each camera should be genlocked.

The genlocking is done by supplying the same composite video signal (VBS) or black burst signal (BB) to the GENLOCK input terminal of each camera.



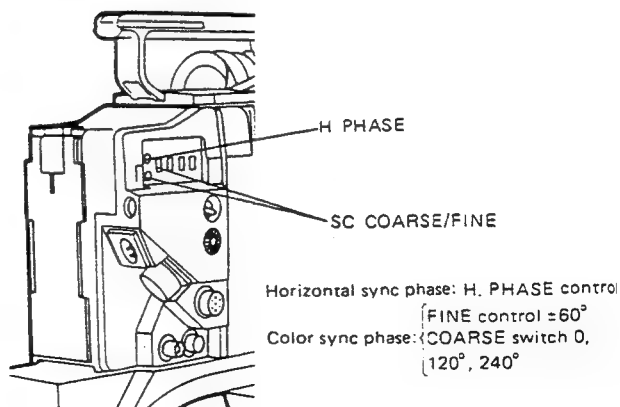
Note:

- In case the remote control unit RM-P200 is not used as shown above, the camera's TEST output terminal is used. At this time, be sure that the composite video signal is output to the TEST output terminal. (Refer to page 14.)
- It is not possible to genlock this camera using the playback signal of the VTR. If you do, it may cause sync disorder or fluctuations in color phase. However, this is not a failure, but because the VTR's playback signal has time axis fluctuations equivalent to wow & flutter of a tape recorder. When the VTR's playback signal has to be used as the reference signal, the signal should be corrected using a time base corrector (TBC), etc.

Phase adjustment

The illustration above shows an example of connecting a special effect generator to the cameras. If more than one camera is used as in this example, the horizontal phase and subcarrier phase of each camera output (VIDEO OUT) should be adjusted and matched with the reference signal supplied to the camera from outside.

For adjustment, use the following switches and controls on the left side of the camera.



SPECIFICATIONS

Color Video Camera KY-25/KY-H25

Camera head	
Image pickup device	: 2/3-inch interline CCD x 3 (R, G, B)
Color separation optical system	: 3-color separation prism
Effective number of pixels	: U-Version 728(H) x 493(V), 360,000 pixels : E-Version 728(H) x 587(V), 430,000 pixels
Color system	: U-Version NTSC (R-Y, B-Y method encoder) : E-Version PAL (R-Y, B-Y method encoder)
Synchronizing system	: Internal (built-in SSG) External (composite video or black burst signal)
Lens mount	: 2/3" Bayonet
Optical filter	: 3200K, 5600K, 5600K + 12.5 % ND
Sensitivity	: f5.6, 2000 lux
Practical minimum illumination	: f1.7 23 lux (+18 dB)
Sensitivity selection	: +9 dB, +18 dB
S/N ratio (standard)	: U-Version 60 dB typical (contour correction OFF, gamma 1, bandwidth 4.2 MHz, Matrix OFF) : E-Version 58 dB typical (contour correction OFF, gamma 1, bandwidth 5 MHz, Matrix OFF)
Horizontal resolution	: Typical 700 TV lines (Y channel) 530 TV lines (R, G and B each channel signal)
Registration	: Zone 1: 0.05 % or less (circle 80 % of picture height) Zone 2: 0.05 % or less (circle of picture width) Zone 3: 0.05 % or less (zone outside the above)
Contour correction	: Horizontal: dual-edged Vertical: 2H (with comb filter)
Video signal output 26-pin connector	: Composite video signal (VBS): 1 Vp-p, and Separate Y, C signals (compatible with S-VHS) or Component signal (Y/R-Y/B for MII or R/G/B ... 0.7 Vp-p, 75 Ω) ... switchable
7-pin connector	: Separate Y/C signals (in Y/C 358 or Y/C 443 mode only)
Test output terminal	: Composite video signal (VBS): 1 Vp-p (any one of R, G, or B signal can be selected using the internal select switch (PIX SELECT))
Audio signal output	: -52 dBm, 600 ohm balanced, -20 dB unbalanced (switchable)
Audio monitor output	: Pin jack, 8 ohm, -20 dB
Mic input signal	: 6P/XLR-3, -52 dBm, 600 ohm (balanced when low signal is output and unbalanced when high signal is output)
Electronic shutter speeds	: *1/60 (normal), 1/250, 1/500, 1/1000 (switchable) (*E-Version:

Power source	: 1/50)
Current consumption	: 12 V DC (10.5 to 15 V) 1.5 A (including the viewfinder VF-P10)
Operating temperature range	: -5°C to +45°C
Weight	: 2.8 kg (KY-25) 2.35 kg (KY-H25)

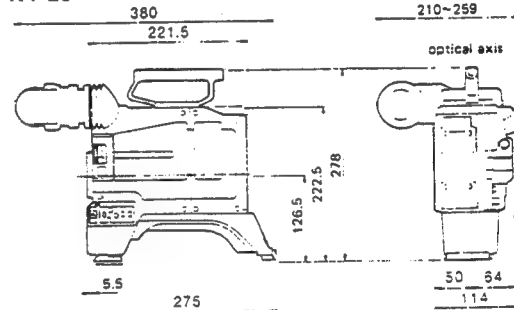
Viewfinder VF-P10 (optional with the KY-H25)

Input signal	: Composite video signal 1 Vp-p (high input impedance)
CRT	: 1.5-inch diagonal 40LB4
Resolution	: 400 lines or more
Indication function	: Tally/top tally (can be switched off) and inside REC lamp Warning/battery (camera power supply) drop, LOW-L (video output) drop VTR tape end, abnormal indication
Power consumption	: 12 V DC, 250 mA
Operating temperature range	: -20°C to +50°C
Weight	: 650 g

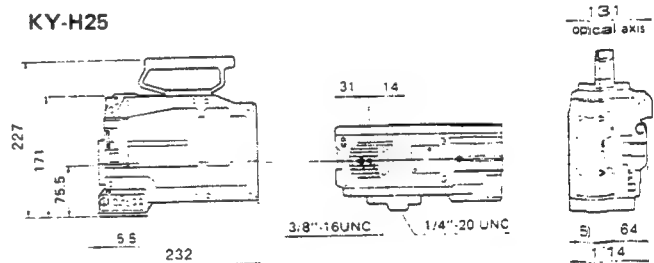
Design and specifications subject to change without notice.

• Dimensions (unit: mm)

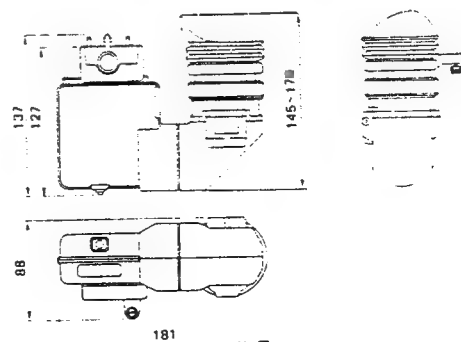
KY-25



KY-H25



VF-P10



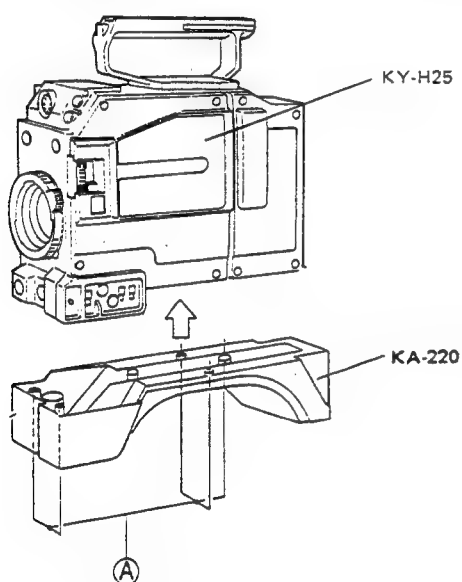
KA-220 SHOULDER PAD

The KA-220 is a shoulder pad exclusively for use with the KY-H25 Color Video Camera.

INSTALLATION

Mount on the KY-H25 using the 5 screws (A) provided with the KA-220.

Tighten the screws from the underside of the pad (bottom).
Use a Philips screwdriver for tightening the screws (A).



SPECIFICATIONS

Weight : 410 g (0.9 lbs)

Dimensions : 95(W) x 68(H) x 275(D) mm
(3-3/4" x 2-11/16" x 10-7/8")

KY-R25 Instruction

Thank you for purchasing the JVC KY-R25 Color Video Camera. Combined with the JVC BR-S410 S-VHS portable video cassette recorder, this camera forms a camcorder so that a single person can manage camera recording easily.

To gain maximum benefit from the camera, it is suggested that you study this booklet carefully. After reading, retain it for future reference.

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Power supply	25
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Warning indication and character display	30
Specifications	32
KA-20 Camera Adapter	34

PRECAUTIONS

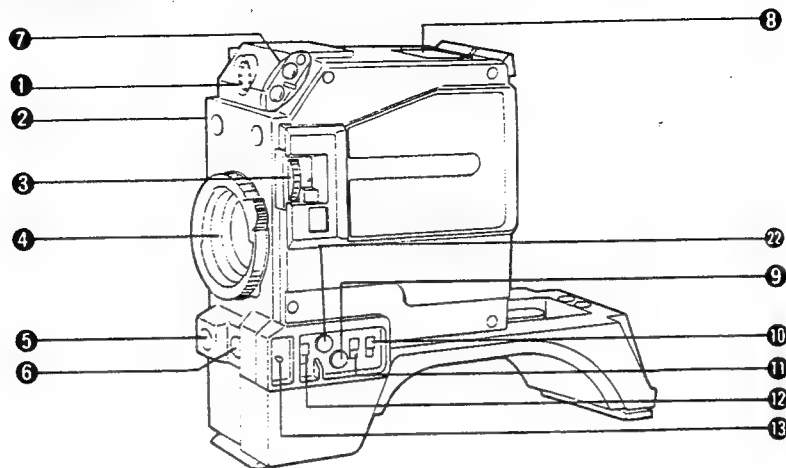
- Do not modify the unit or operate it without cover panel to prevent danger.
- When there is any abnormality (abnormal noise, smell, smoke, etc.) with the unit, immediately turn the power off and contact your nearest JVC-authorized service agent.
- **Ambient temperature**
Do not operate the camera outside a -5°C to $+45^{\circ}\text{C}$ (23°F to 113°F) temperature range. Refer to the corresponding item in the "Specifications" on page 32.
- Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture may contain noise and the colors may be incorrect.

FEATURES

- **Designed for combination with an S-VHS VTR into a camcorder**
When combined with the BR-S410 S-VHS video cassette recorder, this camera forms a camcorder with excellent mobility and utility.
- **This 3-CCD camera meets the requirements for high picture quality.**
 - More compact, lighter in weight and consumes less power than conventional video cameras which use camera tubes.
 - Low lag, high resistance to image burning and no deflection distortion.
 - As the camera has a high sensitivity and S/N, high picture quality can be obtained in dark places.
 - Excellent in vibration resistance and impact resistance.
 - Virtually no misregistration as the image device is free from the influence of terrestrial magnetism.
- **Built-in electronic shutter**
The scanning of the TV camera is $\frac{1}{60}$ sec. (*PAL: $\frac{1}{50}$ sec) when converted to a shutter speed; the image will get blurred if the subject is moving at high speed. However, thanks to the built-in electronic shutter function, the shutter speed can be selected in 3 steps: $\frac{1}{250}$, $\frac{1}{500}$ and $\frac{1}{1000}$, the camera goes a long way in analyzing motion, etc.
- **Character display facility**
On the screen of the viewfinder VF-P10, the camera's operating conditions are indicated by characters (STATUS/MODE/WARNING). While looking into the viewfinder, quick and positive camera operation is possible.
- **Microcomputer-controlled automatic systems**
In addition to auto white/black balance, the auto iris can be controlled by the built-in microcomputer. As a result, in the auto white/black balance adjustment, a highly precise adjustment is possible with ease by one-touch operation. And in the auto iris mode, the optimum amount of light can be selected under any shooting conditions.
- **Comprehensive functions**
 - 2H contour provided as standard.
 - 3-mode white balance setting
With white balance, two memories and 3200K preset are possible. This is effective in case of an emergency or shooting at two locations.
 - Negative signal/positive signal select switch is provided.
 - Built-in color matrix circuit
 - Stereo sound output. If optional stereo microphone MV-P602 is used, stereo sound is output.

CONTROLS, CONNECTORS AND INDICATORS

Camera Head



1 Viewfinder connector (VF)

Connector for a exclusive viewfinder (VF-P10).

2 Lens connector (LENS)

Connect the cable from the standard lens.

3 Filter turret

The turret for the Neutral Density and color temperature conversion filters is provided with four positions.

- 1) CLOSE: Same condition as lens being capped.
- 2) 3200K: For shooting indoors or outdoors with insufficient light.
- 3) 5600K: For shooting outdoors.
- 4) 5600K ND: The 12.5 % ND filter and 5600K color filter are combined for shooting outdoors on a fine day.

4 Lens mount ring

5 Auto setup button (AUTO SETUP)

Press this button to adjust the setup (black/white balance) or the white balance automatically and save the state in memory. When the button is pressed once, the white balance is adjusted; when depressed continuously for longer than one second, the setup is adjusted.

Before pressing this button, set white balance mode switch 10 to the AUTO 1 or AUTO 2 (whichever you want to save) position.

6 Video recorder start switch (VTR)

For start/stop triggering of the VTR.

7 Shutter speed select button and indicator lamp (SHUTTER)

This button permits speed selection of the electronic shutter. This is effective when shooting fast-moving subject.

250 500 1000
Every time this button is pressed, the shutter speed will change to 1/250, 1/500 and 1/1000 in this order (cyclic operation). At this time, the indicator lamp comes on.

NORMAL

If this button is pressed, the shutter speed will become *1/60. Usually use in this state. The indicator lamp goes out. (*E-Version: 1/50)

8 Carrying handle mounting section

Attach the provided carrying handle (KA-232).

9 Display select button (DISP SELECT)

This camera has a function to display the setting conditions of various control switches and settings in the viewfinder screen. There are two display screens; every time this button is pressed, the display will change from "no indication" to "screen 1" to "screen 2" repeatedly.

10 White balance mode switch (W BAL)

This switch permits mode selection of white balance.

AUTO 1: Set to either position when activating the auto and setup or auto white balance function. This AUTO 2 camera has two auto white memory circuits and this switch serves as its select switch.

PRESET: For using in the preset (3200K) state.

11 Camera/color bar select switch (MODE)

CAM: Outputs the video signal from the camera to the VTR.

BARS: Outputs the color bar signal to the VTR.

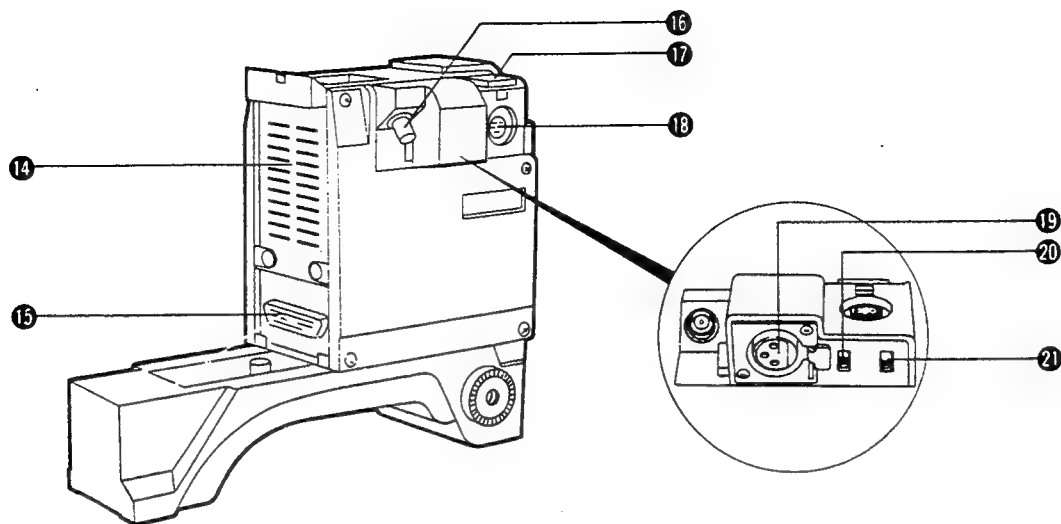
NEGA: Outputs the negative video signal from the camera VTR.

12 Sensitivity select switch (HI-SENS)

For use in low light conditions, the camera sensitivity gain can be boosted by +9 dB or +18 dB. Normally, set this to "0 dB".

13 Operation switch (CAMERA/VTR)

3-step select switch. Selects "ON", "OFF" of the camera power and VTR power-save mode.



14 VTR mount

Mount an S-VHS VTR compatible with the KY-R25. (At present the VTR to be used is the JVC BR-S410, sold separately.)

15 VTR connector (50 pin)

Connect the 50-pin connector of BR-S410 video cassette recorder.

16 Test output connector (TEST OUTPUT)

The signal selected by the internal "PIX SELECT" switch is output here. Either composite video signal (VBS), or B, G, R signal can be selected as an output. This is factory-preset to the composite video signal output.

17 Exclusive microphone mounting shoe

Shoe for mounting the exclusive microphone M-K50 (monaural type) or MV-P602 (stereo type).

18 Exclusive microphone input socket (MIC)

Input socket for the exclusive microphone.

19 Mic input socket (MIC INPUT)

Input socket for the microphone with a 3-pin Cannon connector. The input is parallel with MIC connector 18.

20 Mic output select switch (MIC)

Switches between monaural (L-ch) and stereo (R-ch/L-ch) in accordance with the VTR's audio track specification when recording is to be made onto the VTR via microphone connector 18.

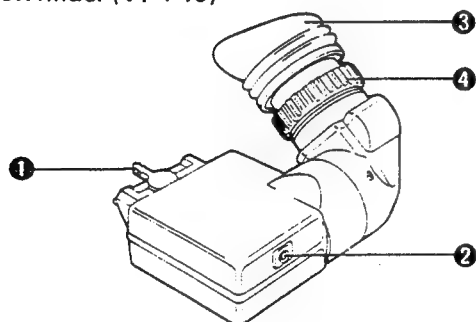
21 VF AUX video select switch (RET)

When the VTR is set to the playback mode and if this switch is set to ON, the playback picture can be monitored in the viewfinder. This serves the same function as the RET switch on the lens.

22 Zebra button (ZEBRA)

Switches the zebra pattern video level indicator on the viewfinder ON/OFF.

Viewfinder (VF-P10)



1 Slide lock lever

After the viewfinder has been attached to the camera, the viewfinder can be slid to the left and right (by 40 mm) if this lever is loosened.

2 Tally lamp

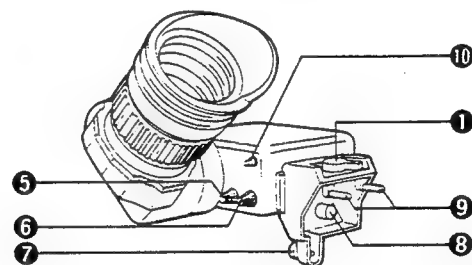
This LED comes on to indicate the recording mode. To switch it off, set switch 10 to OFF.

3 Eyepiece

Focusing adjustment is possible.

4 Eyepiece fixing ring

Loosen and adjust the eyepiece back and forth to match your vision.



5 Contrast control (CONT)

6 Brightness control (BRIGHT)

7 Lock screw

Use to lock the viewfinder onto the camera.

8 VF connector

Directly connected to the video camera.

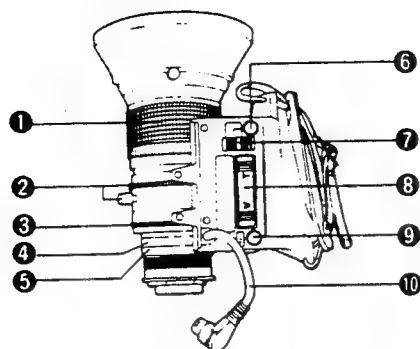
9 Viewfinder fixing pins

Insertion pins for use in attaching to the video camera.

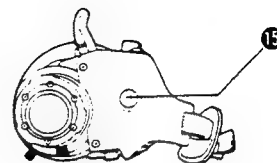
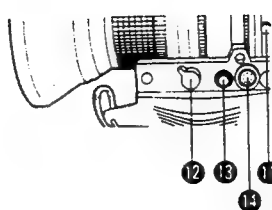
10 Tally switch (TALLY)

Turns the top tally lamp 2 off even when the camera (VTR) is recording. The REC indicator inside the viewfinder will be kept ON.

Zoom Lens (HZ-516B, optional)



- ① **Focus ring**
Focus adjustment ring.
- ② **Zoom lever/zoom ring**
Ring and lever for manual zooming.
- ③ **Iris ring**
When the iris mode switch ⑦ is set to "M" (manual), the iris can be opened and closed manually using this ring. When it is set to "A", the iris is opened and closed automatically.
- ④ **Back focus ring**
For the back focus adjustment, turn this ring.
- ⑤ **Macro ring**
If the ring is turned fully in the direction of the arrow, macro shooting at a distance of about 9 cm from the subject will be possible.
- ⑥ **Momentary iris switch**
Even during the manual iris operation with the iris mode switch set to "M" (manual), iris control can be automatic as long as this button is kept depressed.
- ⑦ **Iris mode switch**
A: For auto iris operation
M: For manual iris operation

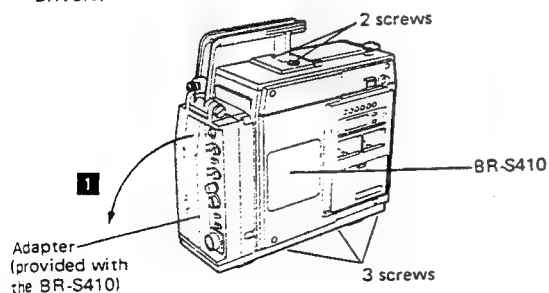


- R: This position can not be used.
- ⑧ **Zoom servo lever**
The speed and direction of the servo zooming is controlled by this see-saw switch.
- ⑨ **Return switch (RET)**
The return video signal from the VTR can be monitored in the viewfinder while this switch is depressed.
- ⑩ **Lens cable**
Connect the lens connector on the camera head.
- ⑪ **Securing knob**
For fixing back focus ring ④.
- ⑫ **Zoom mode knob (ZOOM)**
S: For power zooming
M: For manual zooming
- ⑬ **Focus servo connector**
For connecting the optional focus servo unit.
- ⑭ **Zoom servo connector**
For connecting the optional zoom servo unit.
- ⑮ **VTR switch (VTR)**
For the start/stop operation of the VTR.

INSTALLATION

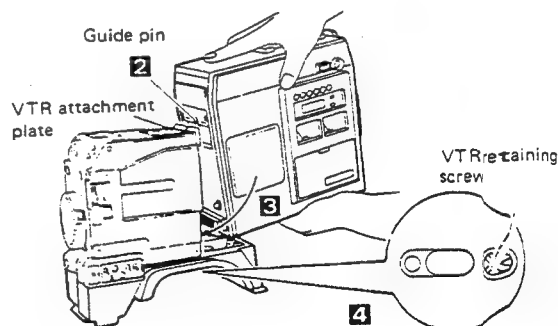
Mounting the S-VHS VTR (BR-S410)

- ① Remove the adapter from the BR-S410.
The adapter is secured to the BR-S410 with three screws on the bottom and two screws on the handle grip on top. To loosen these screws, use flathead and phillips screwdrivers.

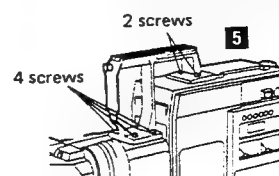


- ② Aligning the guide pin of the BR-S410 to the V-groove on the VTR attachment plate of the KY-R25, press the BR-S410's 50-pin connector against its counterpart on the KY-R25.
- ④ After confirming that the 50-pin connections have been made correctly, secure the two units by tightening the VTR

retaining screw from underneath the shoulder pad of the KY-R25 with a screwdriver.

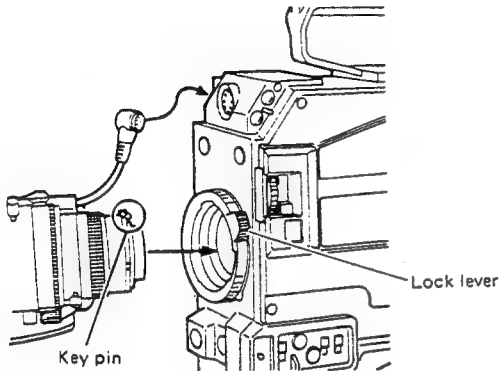


- ⑤ Install the carrying handle (KA-232, accessory) onto the camera head and VTR using the phillips screwdriver.



Lens Installation (Optional HZ-516B)

- 1 Be careful of the key pin of the lens and slot of the mount ring groove, then insert the lens flange into the mount groove firmly.
- 2 Turn the lock lever clockwise to fix the lens.
- 3 Connect the lens cable to the camera head.

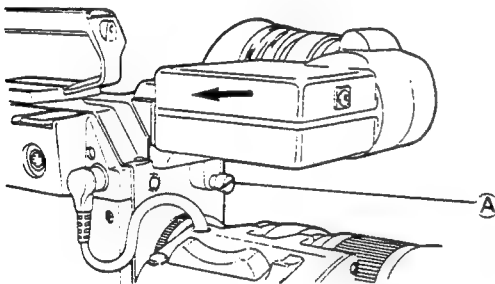


Note:

Make sure that the lens is firmly attached. Otherwise, the back focus adjustment may be incorrect.

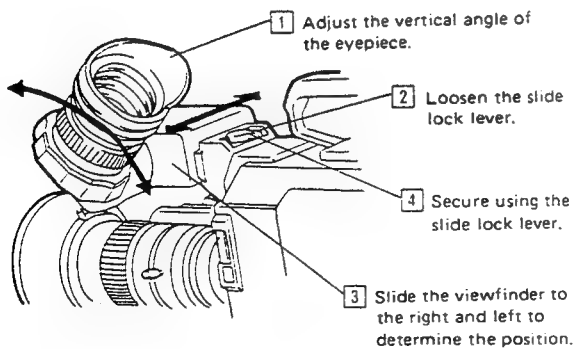
Viewfinder Installation (VF-P10)

- 1 Mate the viewfinder fixing pin with the mounting hole of the camera head, then insert.
- 2 Insert it all the way, then confirm that the viewfinder has been positively connected and turn viewfinder fixing screw A clockwise to lock it.

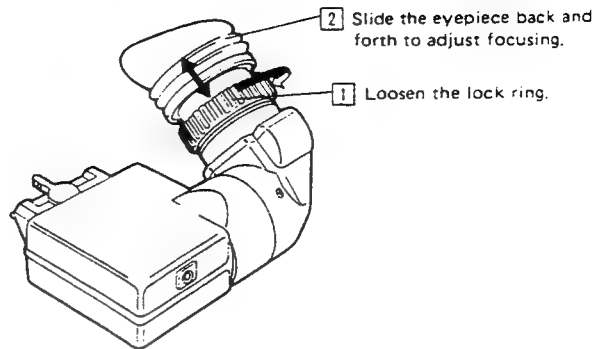


• Eyepiece adjustment

- Vertical angle and left/right slide adjustment



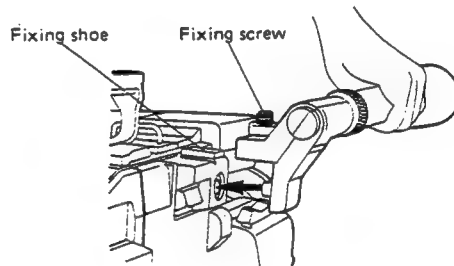
• Focusing adjustment



Microphone Installation

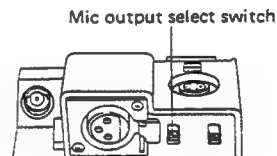
Exclusive microphone (M-K50 or MV-P602, optional)

- 1 Insert the microphone into the mic holder fixing shoe on the right top of the camera.
- 2 Secure the microphone using the fixing screw.



- 3 Set the mic output select switch (illustrated below) according to the type of microphone used.

MONO : For M-K50
STEREO : For MV-P602



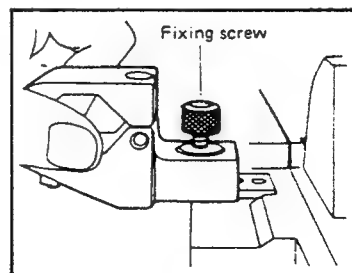
Note:

- Lens motor noise or mechanical friction noise may be picked up by the microphone and recorded. Check possible noise conditions in advance.

Ordinary microphone

Install the microphone onto the camera head using the optional mic holder (Part No. SCUA30312, service parts).

- 1 Insert the mic holder into the mic holder fixing shoe on the right top of the camera, then fix it using the fixing screw.



- 2 Connect the microphone output to the MIC connector on the camera head.
- 3 Set the mic output select switch to "MONO".

POWER SUPPLY

- The KY-R25 camera is powered from the VTR via the 50-pin connector.
- Supply power to the VTR using the optional NB-G1 battery pack or *AA-P200/AA-P250 AC power adapter. To use the

battery pack, the optional battery holder (accessory of BR-S410) is also necessary. For the power supply method or connection, refer to the instruction manual of the relevant power unit or the VTR. (*AA-P200: U-Version only)

BEFORE SHOOTING

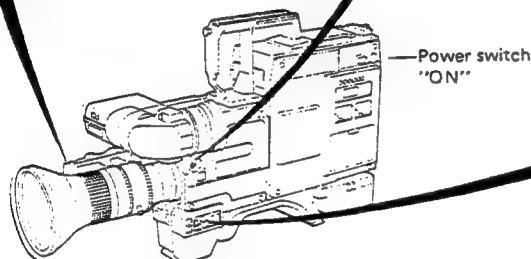
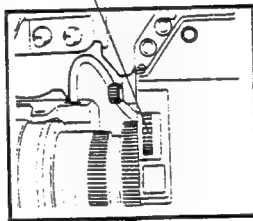
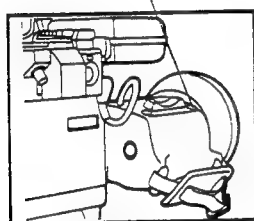
To obtain clear pictures with correct tints, perform back focus and auto setup adjustments. As a rule, back focus adjustment has only to be done when a different lens is mounted. However, auto setup must be adjusted before each shooting

session.

For this adjustment, supply power to the camera/VTR combination and set the controls and switches as follows:

1. PREPARATION

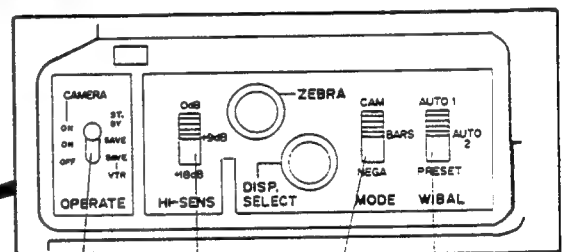
- 1 Iris mode switch: AUTO
- 2 Filter disk: Set according to the table on the right.



Upon completion of setting, point the camera at an appropriate object, then operate the lens focus lever and zoom lever and monitor the picture in the viewfinder screen.

Filter indication	Color temperature	Shooting conditions
1	CLOSE	When the camera is not used
2	3200K	Sunrise or sunset, studio lighting
3	5600K	Outdoors; cloudy or rainy weather
4	5600K + 12.5% ND	Outdoors; fine weather

- 3 Set the switches as shown below.



Operation switch: ON/ST-BY (or ON/SAVE)
 HI-SENS switch: 0 dB
 ZEBRA
 DISP. SELECT
 CAM BARS
 AUTO 1
 AUTO 2
 PRESET
 W/BAL
 WHITE BAL switch: AUTO 1 or AUTO 2
 Camera/color bar select switch: CAM

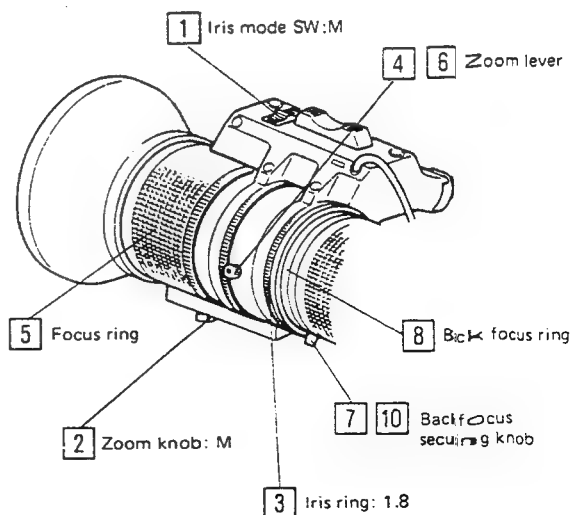
2. BACK FOCUS ADJUSTMENT

Perform this adjustment while observing the monitor TV or viewfinder.

- 1 Set the iris mode switch on the lens to the "M" position.
- 2 Set the zoom knob on the lens to the "M" position.
- 3 Set the iris ring to "f1.8" (open).
- At this time, if the lighting is too strong, reduce lighting or move to a darken place.
- 4 Fully turn the zoom lever to the TELE position.
- 5 Bring into focus using the focus ring.
- 6 Fully turn the zoom lever to the WIDE-angle position.
- 7 Loosen the back focus securing knob.
- 8 Turn the back focus adjustment lever, then adjust it to a position where the focusing is best.
- 9 Perform fine-tuning by repeating steps 4 to 8 a few times.
- 10 Finally, tighten the back focus securing knob.

Note:

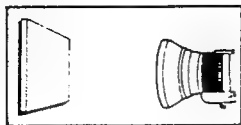
The back focus adjustment is more accurate when the distance between the subject (pattern) and camera is more than 3 m (10 ft.).



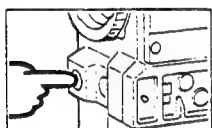
3. AUTO SETUP ADJUSTMENT (BLACK/WHITE BALANCE ADJUSTMENT)

- Start adjustment following steps **1** to **3** (Refer to "1. PREPARATION") described previously.

- 4** Shoot a white object (cloth, wall, etc) so as to fill the viewfinder screen.

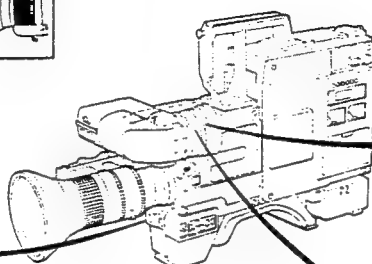


- 5** Hold the auto setup button depressed for longer than one second.



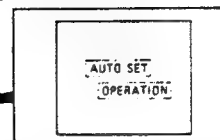
Note:

If the duration in which the auto setup button is being pressed is shorter than one second, only the white balance will be adjusted. Be sure to keep the button depressed for longer than one second for adjustment of the setup. For auto white balance, refer to page 28.

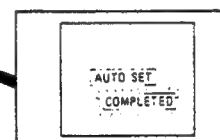


- 8** This completes the setup adjustment. The white balance state is automatically held in the built-in memory circuit.

- 6** The auto setup operation will start, and the following indication will appear in the viewfinder screen.



- 7** Upon completion of the setup adjustment, "COMPLETED" will be indicated flashing for about 4 seconds in the viewfinder screen.

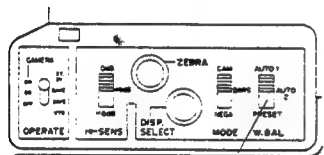


NOTE

- White balance memory**

The KY-R25 have two built-in white balance memory circuits and different color temperature states can be stored in memory, individually.

If the above auto setup adjustment is performed with the W.BAL switch set to "AUTO 1". The white balance state will be held in memory "AUTO 1". Likewise, if it is done with the switch set to "AUTO 2", it will be held in memory "AUTO 2".



W.BAL switch

- Display in the viewfinder**

If the above auto setup adjustment has not been done correctly, the "COMPLETED" indication as described in **7** above will not appear in the viewfinder screen.

Instead, the following error message or more light message will appear.

If the error message appears, check for the following causes and items, then perform auto setup adjustment again.

Note:

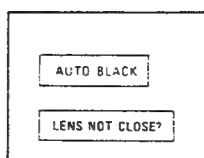
- The error message and more light message will flicker in the screen for about 4 sec. just as in the "COMPLETED" indication, then go out. Pay attention to the contents of the indication.

- Error message during auto black balance**

LENS NOT CLOSE?

Cause: The lens does not perform auto operation.

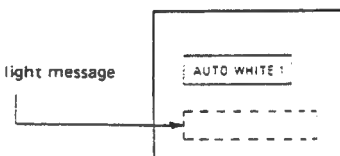
Remedy: Check for lens cable connection.



(Display)

- Error message during auto white balance (including the more light message)**
(The display shows an example in which the W.BAL switch is set to "AUTO 1".)

Error message or more light message (Display)



- Error messages**

LOW LIGHT ERROR

Cause: Insufficient amount of light.

Remedy: Increase lighting or increase sensitivity using the HI-SENS switch. (If the sensitivity is increased, the S/N ratio will deteriorate.)

OBJECT ERROR?

Cause: The subject shot is not suitable.

Remedy: Check if the subject is a white object and change the subject if necessary.

OVER LIGHT ERROR

Cause: The incident light is too strong. The color temperature filter is not suitable.

Remedy: 1. Check to see if strong light such as sunlight or its reflection from the subject is directly introduced to the video camera.

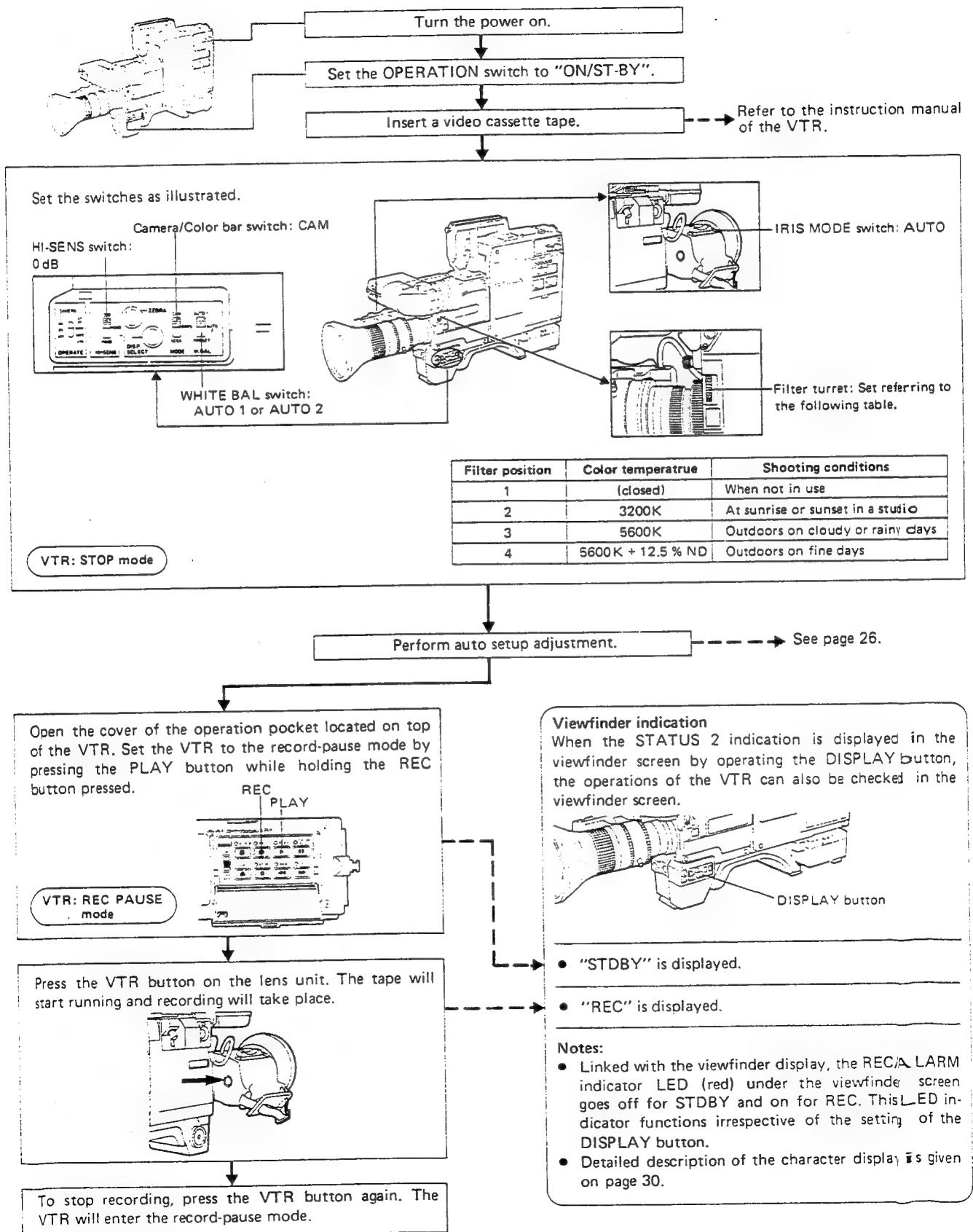
2. Set the filter to the correct position.

- More light message**

MORE LIGHT

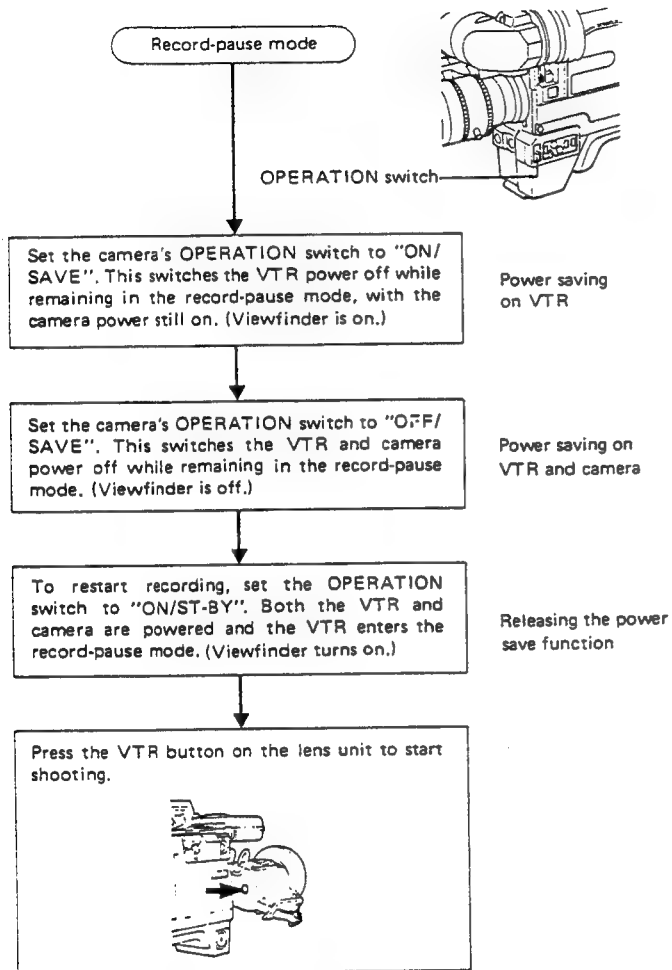
This indication is somewhat different from an error message. This indication appears when the amount of light is insufficient, indicating that the white balance has been automatically adjusted to a level not detrimental to shooting. Although this is not incorrect, it is recommended that the amount of light be increased.

BASIC RECORDING PROCEDURE



POWER SAVING OPERATIONS

Power save functions are incorporated in this system, cutting the power consumption of either the VTR or both the VTR and camera while in the record-pause mode. To save power, after the record-pause mode is engaged, proceed as follows:

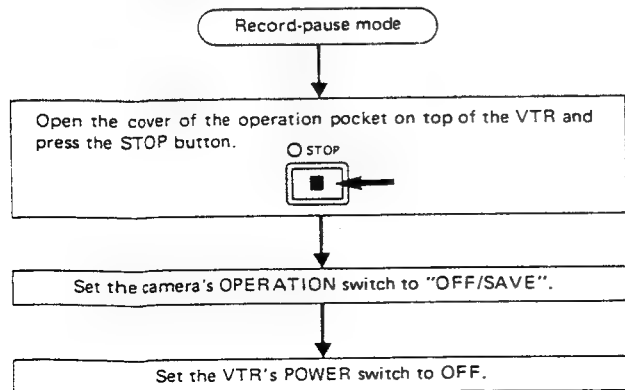


Note:

If the VTR's OPERATION button is pressed in the power save mode, the VTR is turned on and enters the stop mode automatically from the record-pause mode. Recording cannot be restarted by the above-mentioned procedure from this mode. If this happens, first set the VTR to the record-pause mode.

Ending Recording

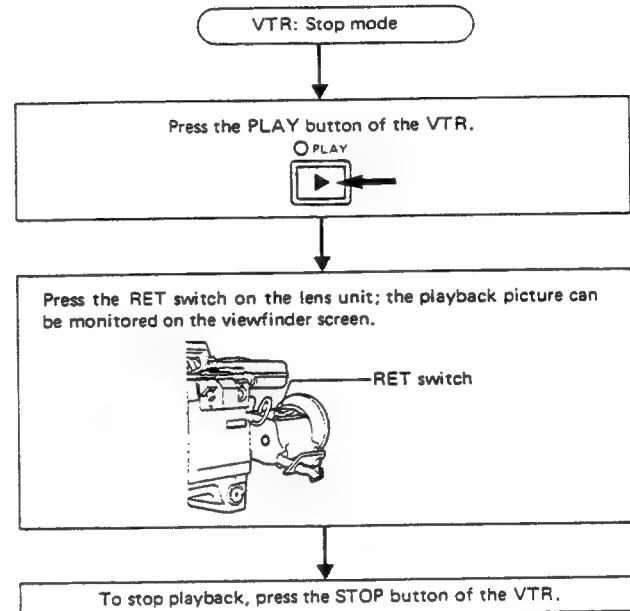
To end recording, proceed as follows:



Note:

If the OPERATION switch is set to "OFF/SAVE" while in the record-pause mode, the power save function operates and the power of the camera and VTR is turned off while in the record-pause mode, in which the tape is still loaded around the head drum of the VTR. To avoid damaging the tape and video heads, be sure to follow the procedure described above.

Monitoring the Playback Picture



White balance adjustment

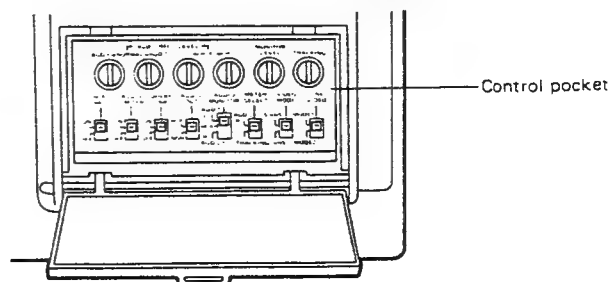
If the camera is moved from indoors to outdoors or vice versa, the type of light source changes. This requires readjustment of white balance.

White balance can be adjusted by following the same procedure as described in "AUTO SETUP ADJUSTMENT" on page 26, but the way the auto setup button is pressed differs. For adjustment of white balance, press the auto setup button once and release it immediately. Be careful not to keep it depressed, otherwise the auto setup adjustment mode will be engaged.

The display in the viewfinder shows AUTO WHITE, instead of AUTO SET. The rest is the same as for auto setup adjustment.

Audio Operation and Level Control

All controls related to audio recording are located in the control pocket of the VTR. For operations of these controls refer to the instruction manual of the VTR.

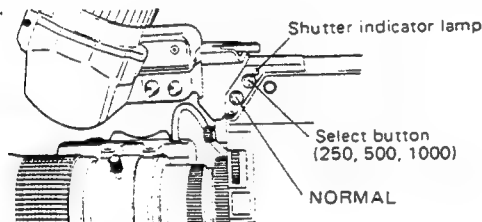


Electronic shutter

This function goes a long way when analyzing the motion of a fast moving object, etc. The position can be changed in 3 steps: 1/250, 1/500 and 1/1000, in addition to normal 1/60 sec.

As the shutter speed is made faster to 1/250, 1/500 and 1/1000, the sensitivity will drop; therefore, shooting at a dark place is not possible. For selection, use the shutter speed select buttons (two) on top of the filter turret to the right side of the camera.

When the power of the camera is switched "ON", 1/60 sec. (U-Version)/1/50 sec. (E-Version) is set as an initial setting. At this time, the shutter indicator lamp shown below does not light.



● Selecting the shutter speed

To change the shutter speed, press the upper button (250, 500, 1000) of the two buttons.

The shutter speed will change from 1/250, to 1/500 to 1/1000 sequentially every time this button is pressed and cycle in a loop. At this time, the shutter indicator lamp will come on. To set to the normal 1/60 sec. (U-Version)/1/50 sec. (E-Version), press the lower button (NORMAL) of the two to return to the initial state.

The shutter speed setting can be confirmed by observing the viewfinder screen using the character display function of this camera.

For the display indication, refer to the character display indication on page 30.

Contour (contour compensation) ON/OFF switch

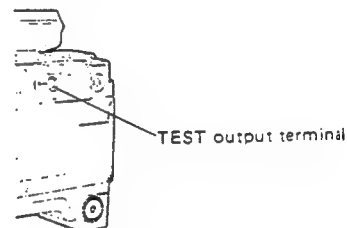
To provide a sharper image, this camera has a built-in 2H contour compensation circuit for both vertical and horizontal signals. This circuit is factory-preset to ON.

The position of the contour switch can be confirmed in the character display. For details, refer to the character display description on page 30.

To switch off the contour compensation, remove the side cover on the right of the camera, set the CONTOUR switch on the internal CP board to "OFF". For detailed operation, consult your dealer.

Selecting the TEST OUT signal

The TEST output terminal on the left of the camera is factory-preset so that the composite video signal (VBS) is output. However, it is also possible to output any one of R, G, or B signal by internal switch. (* R, G, or B signal does not have a color component. Therefore, even if it is connected to a color monitor, it appears as a monochrome signal on the screen.)



To switch this, remove the side cover on the right of the camera, then change the setting of the "PIX SELECT" switch on the internal CP board. When the test output signal is changed, the signal to be monitored on the viewfinder screen is also changed accordingly.

For further detailed operation, consult your JVC authorized dealer.

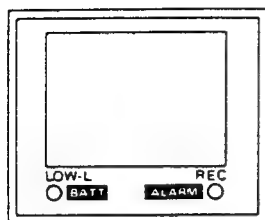
The type of signal to be output to the TEST output terminal can be confirmed in the viewfinder screen using the display function of this camera.

Refer to the character display indication described later.

WARNING INDICATION AND CHARACTER DISPLAY

Warning indication using LEDs

The viewfinder includes the following indicator lamps, giving a warning during shooting.



- **LOW-L/BATT (red)**

LOW-L: Lights when amount of light is too low. Even if the lamp is lit, recording can be done but the picture will be a dark; however, this indicates that additional lighting is necessary.

BATT: Flashes when the battery in the camera or VTR is almost exhausted.

- **REC (green)**

REC: The REC (recording) lamp lights interlocked with the indicator lamp in front of the viewfinder.

ALARM: Flashes when the VTR has trouble or the tape comes to the end.

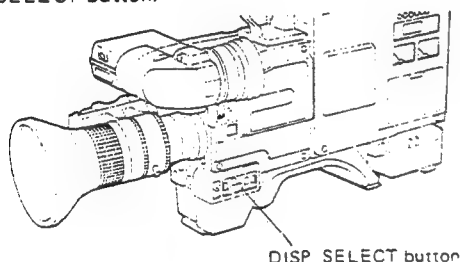
Character display indication

The display indications include the STATUS indication, MODE indication and WARNING indication; the details of each are as follows:

1 STATUS indication

Various control switches and their settings are indicated by characters.

There are two display screens, which can be selected using the DISP SELECT button.



DISP SELECT button

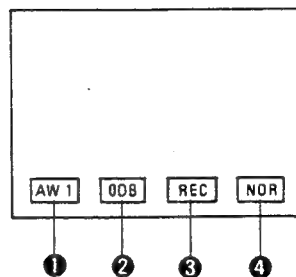
The DISP SELECT button is a push-button switch, which changes as follows every time it is pressed.



The STATUS OFF indicates no-indication state, to which setting the display is always initialized when the operation switch is switched ON from OFF.

STATUS 1 indication

The following display appears in STATUS 1 mode.



1 Position indication of the W.BAL switch

PRE:

Indicates that the W.BAL switch is set to the "PRESET" position. The white balance of the camera is set to the preset (3200K) state and the auto setup function cannot be activated.

AW 1:

Indicates that the W.BAL switch is set to the "AUTO 1" position. The white balance of the camera is set to the balance which is held in the "AUTO 1" memory of the camera.

If the auto setup adjustment is made while this is indicated, the white balance will be automatically adjusted and the balance at this point will be rewritten to the AUTO 1 memory.

AW 2:

Indicates that the W.BAL switch is set to the "AUTO 2" position. Just as in the above AUTO 1, the white balance of the camera is set to the balance stored in the "AUTO 2" memory. If the auto setup adjustment is made while this is indicated, the AUTO 2 memory will be rewritten.

* For the auto setup adjustment, refer to page 26.

2 Position indication of the HI-SENS switch

0 DB: Indicates that the HI-SENS switch is set to the "0 dB" position.

9 DB: Indicates that the HI-SENS switch is set to the "+9 dB" position.

18 DB: Indicates that the HI-SENS switch is set to the "+18 dB" position.

3 Indication of the VTR mode

STD BY: Indicates that the VTR is in the ST-BY mode.

REC: Indicates that the VTR is in the REC mode.

④ Electronic shutter speed indication

NOR : Indicates that the shutter speed is set to 1/60 sec.
(U-Version)/1/50 sec (E-Version)

250 : Indicates that the shutter speed is set to 1/250 sec.

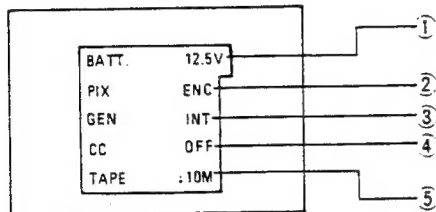
500 : Indicates that the shutter speed is set to 1/500 sec.

1000 : Indicates that the shutter speed is set to 1/1000 sec.

* For changing the electronic shutter speed, refer to page 29.

STATUS 2 indication

The following display appears in the STATUS 2 mode.



① Battery voltage indication

The battery voltage will be indicated digitally.

② Signal indication of TEST OUT/VF OUT

The type of video signal appearing at the camera's TEST OUT terminal and viewfinder screen is indicated.

PIX ENC : The encoder output (Composite) signal is output.

PIX R : The red signal is output.

PIX G : The green signal is output.

PIX B : The blue signal is output.

Note:

- The camera is factory-preset to the "PIX ENC" position. To obtain another signal output, change the setting of the "PIX SELECT" switch inside the camera.
- When the foregoing PIX R, PIX G or PIX B signal is output, the signal does not have a color component. Therefore, even if it is connected to a color monitor, it appears as a monochrome signal on the screen.

③ GENLOCK mode indication

Indicates the genlock mode of the camera.

GEN INT : Operates by the internal SSG (sync signal generator) of the camera (INT mode).

④ Contour indication

CC ON : The contour compensation is being made.

CC OFF : The contour compensation is not being made.

* To switch ON or OFF the contour compensation, use the internal switch.

⑤ Remaining tape indication

When the amount of remaining tape in the VTR becomes low, the remaining time is indicated.

TAPE ↓10M : When the tape remaining time becomes less than 10 minutes, this is indicated.

* When the remaining tape time is 10 minutes or more, nothing is indicated.

② MODE indication

The execution mode during the auto setup adjustment will be indicated.

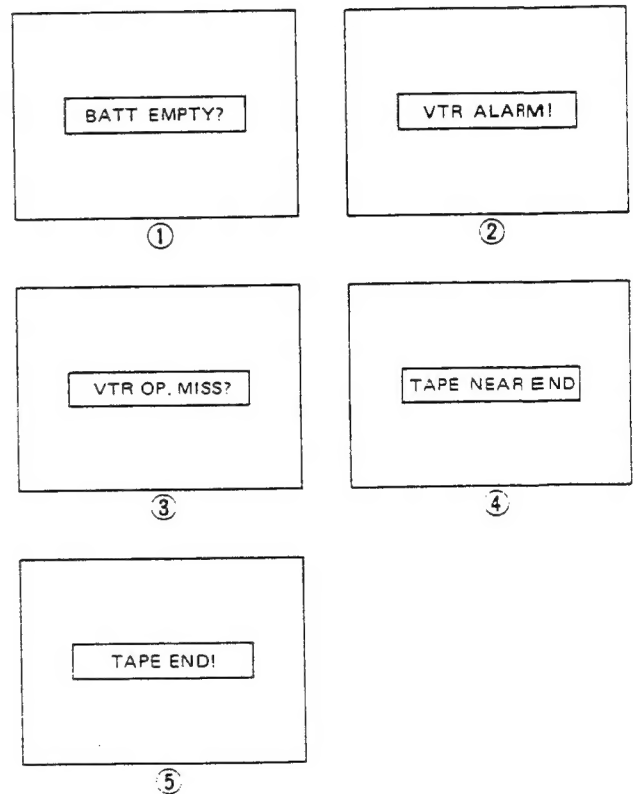
When the auto setup button is pressed, if the status indication is displayed, it will disappear, and replaced by the mode indication.

Upon completion of the auto setup operation, the results will be indicated for about 4 seconds, then the original status indication will be resumed.

For the details of the execution mode indication, refer to "auto setup adjustment" on page 26.

③ Warning display

When the VTR or camera malfunctions, the display indicates the type of malfunction. This warning display has priority over other indications (STATUS or MODE). The following five indications are given.



① **BATT EMPTY?** :

This display appears when the battery is becoming low. As soon as possible after this display appears, replace the battery with a charged one.

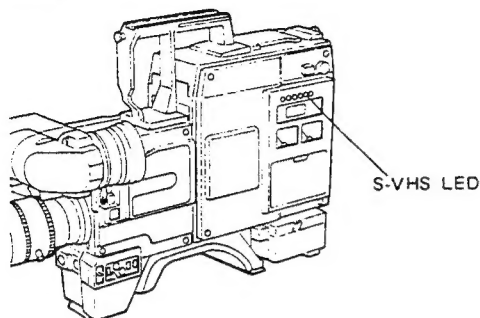
② **VTR ALARM!** :

This display appears when there is an abnormality in tape running or when moisture has condensed on the head drum.

③ **VTR OP. MISS?** :

This display appears when the VTR is not recording properly after the VTR button on the front panel or lens unit of the camera has been pressed. Possible causes for this are as follows (check each possible cause).

- A regular VHS cassette is inserted in the S-VHS mode. Check the cassette tape. The S-VHS LED will blink in this case.



- The VTR has not been engaged in the record-pause mode.
First set the VTR to the record-pause mode.
- The STOP button on the VTR was pressed, instead of the VTR button on the camera, during recording.

④ **TAPE NEAR END** :

This display appears during recording when the remaining tape length is less than three minutes. To continue recording, a new tape should be inserted.

⑤ **TAPE END!** :

This display appears when the tape is coming to an end during recording. With this indication, the VTR automatically enters the stop mode, warning that recording is possible only with a new tape.

TROUBLESHOOTING

- Auto setup or auto white balance adjustment cannot be completed.
 - Is the filter turret correctly set?
 - Is the subject you are shooting a colored object?
- Auto setup or auto white balance adjustment cannot be performed.
 - No display appears in the viewfinder screen.
 - Are you pressing the RET button on the lens?
 - Is the camera's RET switch set to ON?
 - Are you monitoring the VTR playback picture?
- Viewfinder screen is darker, or no raster appears.
 - Scenes being shot are not visible in the viewfinder.
 - Are the viewfinder's contrast and brightness controls set properly?
 - Is the filter turret correctly set? Is the lens iris closed?
 - Is the camera's RET switch set to ON?

SPECIFICATIONS

Color Video Camera KY-R25

Camera head

Image pickup device	: 2/3-inch interline CCD x 3 (R, G, B)
Color separation optical system	: 3-color separation prism
Effective number of pixels	: U-Version 728(H) x 493(V), 360,000 pixels E-Version 728(H) x 587(V), 430,000 pixels

Color system

U-Version	: NTSC (R-Y, B-Y method encoder)
E-Version	: PAL (R-Y, B-Y method encoder)

Synchronizing system	: Internal (built-in SSG)
Lens mount	: 2/3" Bayonet
Optical filter	: 3200K, 5600K, 5600K + 12.5 % ND
Sensitivity	: f5.6, 2,000 lux
Practical minimum illumination	: f1.7 23 lux (+18 dB)
Sensitivity selection	: +9 dB, +18 dB
S/N ratio (standard)	: U-Version 60 dB typical (contour correction OFF, gamma 1, bandwidth 4.2 MHz, Matrix OFF) E-Version 58 dB typical (contour correction OFF, gamma 1, bandwidth 5 MHz, Matrix OFF)

Horizontal resolution	: Typical 700 TV lines (Y channel) 530 TV lines (R, G and B each channel signal)
Registration	: Zone 1: 0.05 % or less (circle 80 % of picture height) Zone 2: 0.05 % or less (circle of picture width) Zone 3: 0.05 % or less (zone outside the above)

Contour correction	: Horizontal: dual-edged Vertical: 2H (with comb filter)
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Video signal output	:
50-pin connector	: Composite video signal (VBS); 1 Vp-p, Separate Y/C signals (compatible with S-VHS) or Component signal (Y/R-Y/B-Y)
Test output terminal (50-pin connector)	: Composite video signal (VBS): 1 Vp-p (any one of R, G, or B signal can be selected using the internal select switch <PIX SELECT>)

Audio signal output	: -52 dBm, 600 ohm balanced, -20 dB unbalanced (switchable), monaural or stereo output depending on the microphone used
---------------------	---

Audio monitor output	: Pin jack, 8 ohm, -20 dB
Mic input signal	: 6P/XLR-3, -52 dBm, 600 ohm (balanced when low signal is output and unbalanced when high signal is output)

Electronic shutter speeds	: *1/60 (normal), 1/250, 1/500, 1/1000 (switchable) (*E-Version: 1/50)
---------------------------	--

Power source : 12 V DC (10.5 to 15 V)
 Current consumption : 1.4A (including the viewfinder VF-P10)
 Operating temperature range : -5°C to +45°C
 Weight : 2.4 kg (without VF-P10)

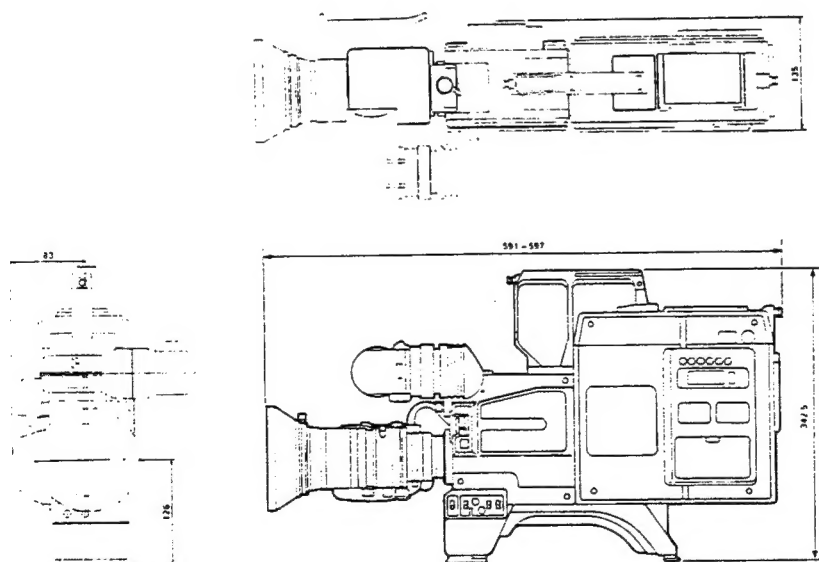
Viewfinder VF-P10

Input signal : Composite video signal 1 Vp-p (high input impedance)
 CRT : 1.5-inch diagonal 40LB4
 Resolution : 400 lines or more
 Indication function : Tally/top tally (can be switched off) and inside REC lamp
 Warning/battery (camera power supply) drop, LOW-L (video output) drop
 VTR tape end, abnormal indication
 Power consumption : 12 V DC, 250 mA
 Operating temperature range : -20°C to +50°C
 Weight : 650 g

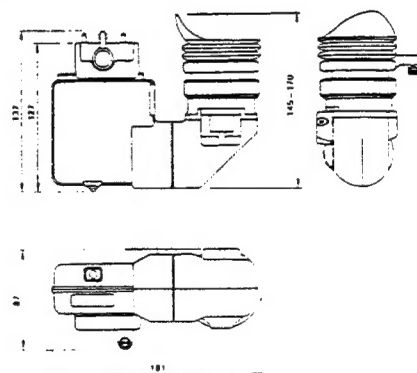
Design and specifications subject to change without notice.

• Dimensions (Unit: mm)

KY-R25 (with Video Recorder BR-S410 and Lens HZ-516B)



VF-P10



KA-20 CAMERA ADAPTER

(Exclusive camera adapter for KY-R25 Color Video Camera)

- KA-20 is a Camera Adapter designed to attach a separate type VTR to the KY-R25 color video camera.

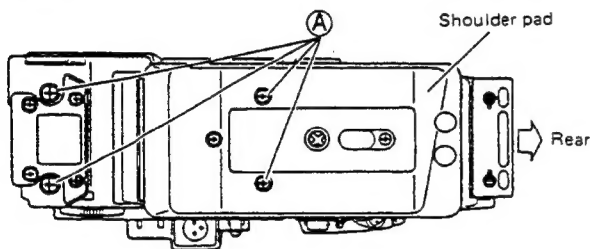
PRECAUTIONS

- KA-20 Camera Adapter is for the exclusive use of the KY-R25 color video camera, and it cannot be adapted to any other camera.
- To set the two units of KA-20 and KY-R25, the optional carrying handle KA-231 is necessitated.

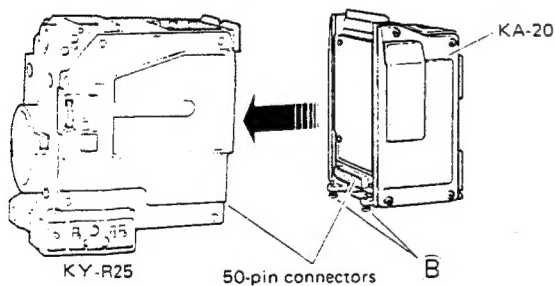
INSTALLATION

- In the case the VTR and carrying handle are attached to the KY-R25 video camera, remove them first referring to the article "VTR Installation" in the instruction book of KY-R25.

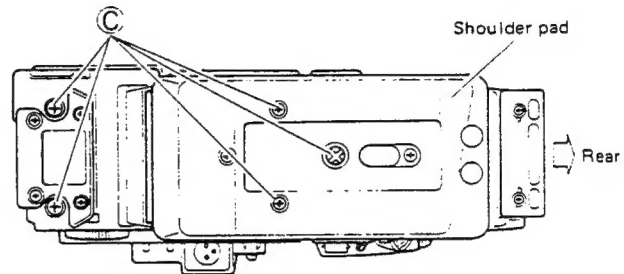
1. The illustration below shows the bottom view of the shoulder pad mounted to the KY-R25. Loosen four screws (A) with a philips screwdriver. Then remove the shoulder pad.



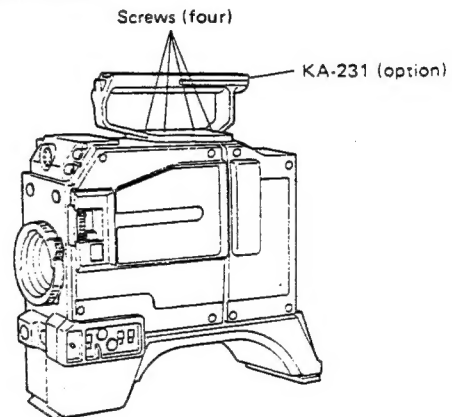
2. Attach KA-20 to KY-R25's rear side by connecting their 50-pin connectors correctly. Turn two screws (B) clockwise with philips screwdriver to secure KA-20.



3. Attach the shoulder pad to the camera head. Turn five screws (C) clockwise with philips screwdriver to secure the shoulder pad.



4. Attach the optional carrying handle KA-231 to the top of the camera head with four screws provided with KA-231. See the figure below.



SPECIFICATIONS

Weight : 620 g
Dimensions : 114(W) x 160(H) x 89(D) mm

Design and specifications are subject to change without notice.

NOTE

Camera adapter KA-20
Shoulder pad KA-220
Viewfinder VF-P10
Tripod base KA-500X
Carrying handle KA-231
Carrying handle KA-232
Carrying case CB-P410

Although model names KY-17 and KY-25 are not stated in the instruction manuals of the above accessories for the KY-17/25 series, the above accessories can be connected to both KY-17/25 series as well as KY-15/20 series cameras.